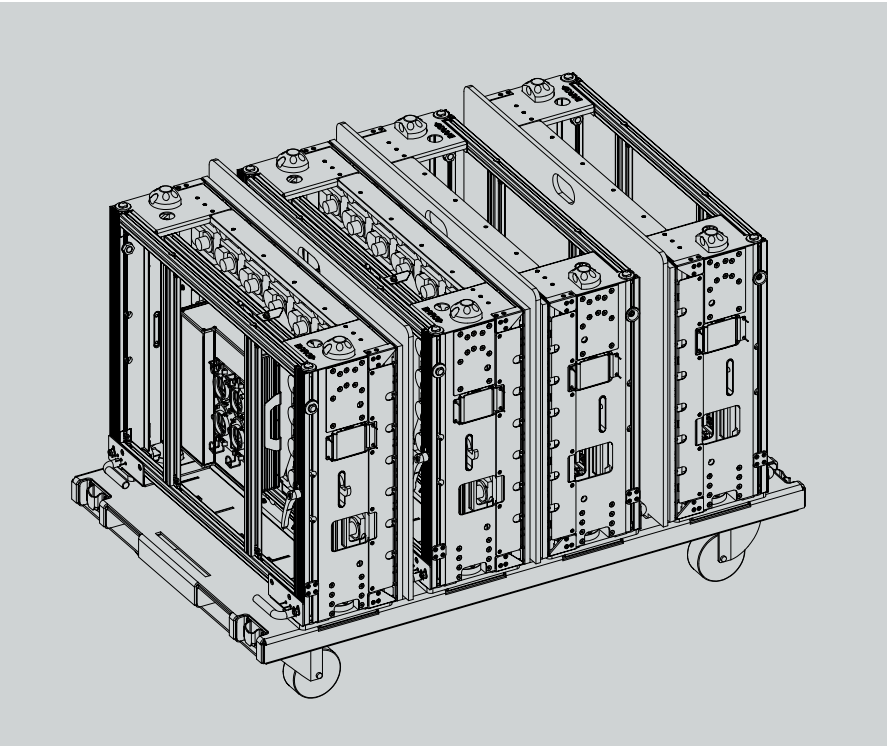
OLite rental display



Installation manual

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29/05/2007

BARCO

Visibly yours

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TABLE OF CONTENTS

1. SAFETY

About this chapter

Read this chapter attentively. It contains important information to prevent personal injury while installing an OLite rental display. Furthermore, it includes several cautions to prevent damage to the OLite rental tile. Ensure that you understand and follow all safety guidelines, safety instructions and warnings mentioned in this chapter before installing the OLite rental display. After this chapter, additional “warnings” and “cautions” are given depending on the installation procedure. Read and follow these “warnings” and “cautions” as well.

Overview

- Safety guidelines
- Important safety instructions
- Important warnings
- Important warnings concerning flight cases

1.1 Safety guidelines

Personal protection

WARNING: Ensure you understand and follow all the safety guidelines, safety instructions, warnings and cautions mentioned in this manual.

WARNING: Be aware of suspended loads.

WARNING: Wear a hard hat to reduce the risk of personal injury.

WARNING: Be careful while working with heavy loads.

WARNING: Mind your fingers while working with heavy loads.

Installation personnel

This installation must be performed by authorized and qualified technical personnel only.

Accredited safety officers must ensure the safety of the site, construction, assembly, connection, use, dismantling, transport etc. of such safety critical systems.

Caution

Installation should be performed only after you are thoroughly familiar with all of the proper safety checks and installation instructions. To do otherwise increases the risk of hazards and injury to the user.

Assembly parts are designed for intended use only in conjunction with Barco OLite displays.

Do not modify and/or replicate any component. Barco uses specific materials and manufacturing processes in order to achieve part strength. Consult Barco for assistance with custom applications.

Always follow Barco installation instructions. Contact Barco if you should have any question regarding the safety of an application.

The manufacturer assumes no liability for incorrect, inadequate, irresponsible or unsafe assembly of systems.

Product care

Structural & mounting components should be kept dry, clean, lubricated (only if recommended), coated properly, and otherwise maintained in a manner consistent with part design. Barco products must be used in a manner consistent with their design and inspected on a routine basis for security, wear, deformation, corrosion and any other circumstances that may affect the load handling capability of the part.

Barco recommends inspections at regular intervals for all installations and increasing in frequency for more critical installations. If a part is found to have damage, which may cause a decrease in load capability, the part must be removed for service or replaced immediately.

Under no circumstances are Barco parts repairable by anyone other than Barco.

1.2 Important safety instructions

Instructions:

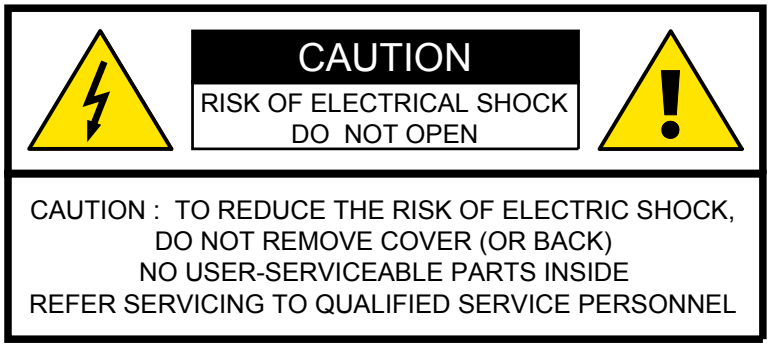
- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Clean only with materials or chemicals that are inert, nonabrasive, noncorrosive and non-marking. Consult the manufacturer for further advice should any doubts exist regarding any cleaning procedure.
- Do not block ventilation openings. Install in accordance with the manufacturers instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding type plugs/sockets. If the provided sockets/plugs are damaged then replacement of the defective parts must be undertaken immediately.
- Protect the power/data cords from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus. Replace damaged power/data cords immediately.
- Only use attachments/accessories specified by the manufacturer.
- Disconnect the power to this apparatus during lightning storms or provide suitable additional lightning protection. Unplug this apparatus when unused for long period of time.
- Refer all servicing to qualified service technicians/personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, the apparatus does not operate normally, or has been dropped.
- Use only with systems or peripherals specified by the manufacturer, or sold with the apparatus. Use caution during lifting/moving or transporting to avoid damage by possible tipping.

1.3 Important warnings

Important warnings:

Risk of electric shock:

Do not open. To reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.



The lightning flash with an arrowhead within a triangle is intended to tell the user that parts inside this product may cause a risk of electrical shock to persons.

The exclamation point within a triangle is intended to tell the user that important operating and/or servicing instructions are included in the technical documentation for this equipment.

Maximum and minimum ambient temperature:

The maximum ambient temperature for the LED wall is 40 °C, the minimum temperature is -20 °C.

High leakage current:

The combination of multiple tiles in an installation results in increased levels of leakage current. In order to avoid risk of electric shock due to high leakage current, proper grounding of the installation is required.

Flammable materials:

Keep flammable materials away from the installation (such as curtains). A lot of energy is transferred into heat. The installation should be such that the amount of air flow required for safe operation of the equipment is not compromised. Proper ventilation must be provided.

ESD and LED's:

LED components used in OLite devices are ESD (Electro-Static Discharge) sensitive. To prevent the possibility of destroying LED components do not touch either in operation or while switched off.

Risk of electric shock / Risk of fire: To protect against risk of fire caused by overloading of power cables, MAXIMUM 2 may be connected in parallel. Each power source cable supplying maximum 2 should be protected by a circuit breaker or fuses rated 16 A / 250 VAC (15 A / 250 VAC in the USA and Canada). Note that one OLite tile requires 200-240 VAC, 50-60 Hz, 4.22 amps at 230 VAC.

Disconnect device:

When the appliance inlets of the individual tiles are not accessible, the socket outlets supplying the rack shall be installed near the equipment and be easily accessible, or a readily accessible general disconnect device shall be incorporated in the fixed wiring.

This equipment MUST be earthed:

In order to protect against risk of electric shock, the installation should be properly grounded. Defeating the purpose of the grounding type plug will expose you to the risk of electric shock.

Power system:

It is recommended to use a TN-S power distribution system (a power distribution system with a separate neutral and grounding conductor) in order to avoid large ground current loops due to voltage differences in the neutral conductor. The total electrical installation should be protected by an appropriately rated disconnect switch, circuit breakers and Ground Fault Current Interrupters. The installation shall be done according to the local electrical installation codes. In Europe special attention should be given to EN 60364, the standard for electrical installation of buildings. In Germany VDE 0100 should be adhered to.

Mains cords:

The power cords delivered with this system have special properties for safety. They are not user serviceable. If the power cords are damaged, replace them only with new ones. Never try to repair a power cord.

Data cables:

The data cables provided with this system have special properties for safety. They are not user serviceable. If the data cables are damaged, replace them only with new ones. Never try to repair a data cable. Per requirements of the National Electrical Code® in the USA , the length of a data cable must not exceed 42 m (140 feet). Avoid exposure of data cables to accidental contact with lightning or power conductors.

1.4 Important warnings concerning flight cases

Important warnings concerning stacking/transporting OLite rental flight cases

- Stack maximum two (2) OLite rental flight cases high. Never higher.
- Surface on which flight case is standing must be level to ensure that the total load is evenly spread out among the four wheels. The surface must also be able to support the load safely.
- Before stacking or transporting flight cases, check the wheels and their fixation screws for wear or defects.
- Before stacking or transporting flight cases, check that the OLite rentals are securely locked into the base of the flight case.
- Before stacking or transporting flight cases, check that the four lock handles on each flight case are in good working order and locked securely.
- When stacked, make sure the wheels of the upper flight case are precisely positioned in the stacking dishes of the flight case below.
- Stacked flight cases may not be moved. Before stacking, the lower flight case must already be in its final resting position before placing the second one upon it.
- Never stack loaded flight cases in a truck or other transport medium, unless each flight case is rigidly strapped.
- In the event of a wheel breaking, flight cases must be rigidly strapped to prevent a stack collapsing.
- Use an appropriate forklift to raise flight cases and take the necessary precautions to avoid personal injury.

2. INSTALLATION REQUIREMENTS

About this chapter

This chapter enumerates the mechanical requirements for the OLite display, the electrical requirements to power up the OLite display and the system requirements to run the control software efficient.

Overview

- Mechanical requirements for the OLite rental display
- Electrical requirements for the OLite rental display
- System requirements for the Control software

2.1 Mechanical requirements for the OLite rental display

Weight

Do not underestimate the weight of a complete OLite rental display. Be sure that the floor or truss installation on which the OLite rental display has to be installed is capable of handling five (5) times the complete load of the display. Note that one OLite rental tile weighs approximately 60 kg (or 100 kg per square meter display). Do not forget to take into account the weight of the ballast required in case of a base stand OLite rental display.

Levelled surface

The surface on which an OLite rental display has to be installed must be levelled. Never install an OLite rental display on an inclined surface.

WARNING: Ensure that, when installing a base stand OLite rental display upon a platform, the top of the LED-wall does not reach more then 20 meters above ground level.

Ballast

Depending on the expected wind load, the height of the display and the position of the LED-wall upon the foot beams (somewhere between front and middle) additional weight (ballast) will be required. Consult chapter “Ballast values” or use the “Ballast calculator” tool available on Barco’s secured web site to calculate the minimum ballast you require for safe installation of your OLite rental display.

2.2 Electrical requirements for the OLite rental display

Power requirements

One OLite tile requires 200-240 VAC, 50-60 Hz, 4.22 amps at 230 VAC. Note that one OLite tile correspond with a display surface of 0.6 m². Each OLite tile has a control box with a power loop through connector. However, MAXIMUM 2 OLite control boxes may be connected in parallel. So, one power source cable has to be provided per 2 OLite tiles. Every power source cable should be protected by a circuit breaker or fuses rated 16 A / 250 VAC (15 A / 250 VAC in the USA and Canada).

Barco provides a range of power boxes, which meet the requirements of your OLite display. Contact Barco for more information about power boxes and power requirements for your OLite display.

Power system:

It is recommended to use a TN-S power distribution system (a power distribution system with a separate neutral and grounding conductor) in order to avoid large ground current loops due to voltage differences in the neutral conductor. The total electrical installation should be protected by an appropriately rated disconnect switch, circuit breakers and Ground Fault Current Interrupters. The installation shall be done according to the local electrical installation codes. In Europe special attention should be given to EN 60364, the standard for electrical installation of buildings. In Germany VDE 0100 should be adhered to.

Disconnect device:

When the appliance inlets of the individual tiles are not accessible, the socket outlets supplying the rack shall be installed near the equipment and be easily accessible, or a readily accessible general disconnect device shall be incorporated in the fixed wiring.

This equipment MUST be earthed:

In order to protect against risk of electric shock, the installation should be properly grounded. Defeating the purpose of the grounding type plug will expose you to the risk of electric shock.

2.3 System requirements for the Control software

Before you begin

Is assumed you are familiar with the Windows operating system at your site.

The CD-ROM in your package contains a Windows-based installation program. You can install the software from the CD-ROM.

System requirements

Minimum specifications :

- Hardware
  - PC Pentium III or equivalent, 1 GHz
  - 512 Mb RAM
  - Free hard disk space: 300 Mb
  - XGA resolution (1024 x 768)
  - Serial communication port
- Software
  - Windows 2000, Windows XP Home or Windows XP Professional

Recommended specifications :

- Hardware
  - PC Pentium IV or equivalent, 2.4 GHz
  - 512 Mb RAM
  - 300 Mb hard disk free space
  - SXGA resolution (1280 x 1024) with 32 Mb video memory
  - Serial communication port
- Software
  - Windows XP Professional

3. SYSTEM OVERVIEW

Overview

- Introduction

3.1 Introduction

The fundamental elements of an OLite rental display system are:

- OLite modules.
- OLite rental structure.
- OLite rental foot, foot beams and stacker or OLite rental truss beams
- Rental power box.
- Digitizer.
- Control software.

Block diagram OLite display system:

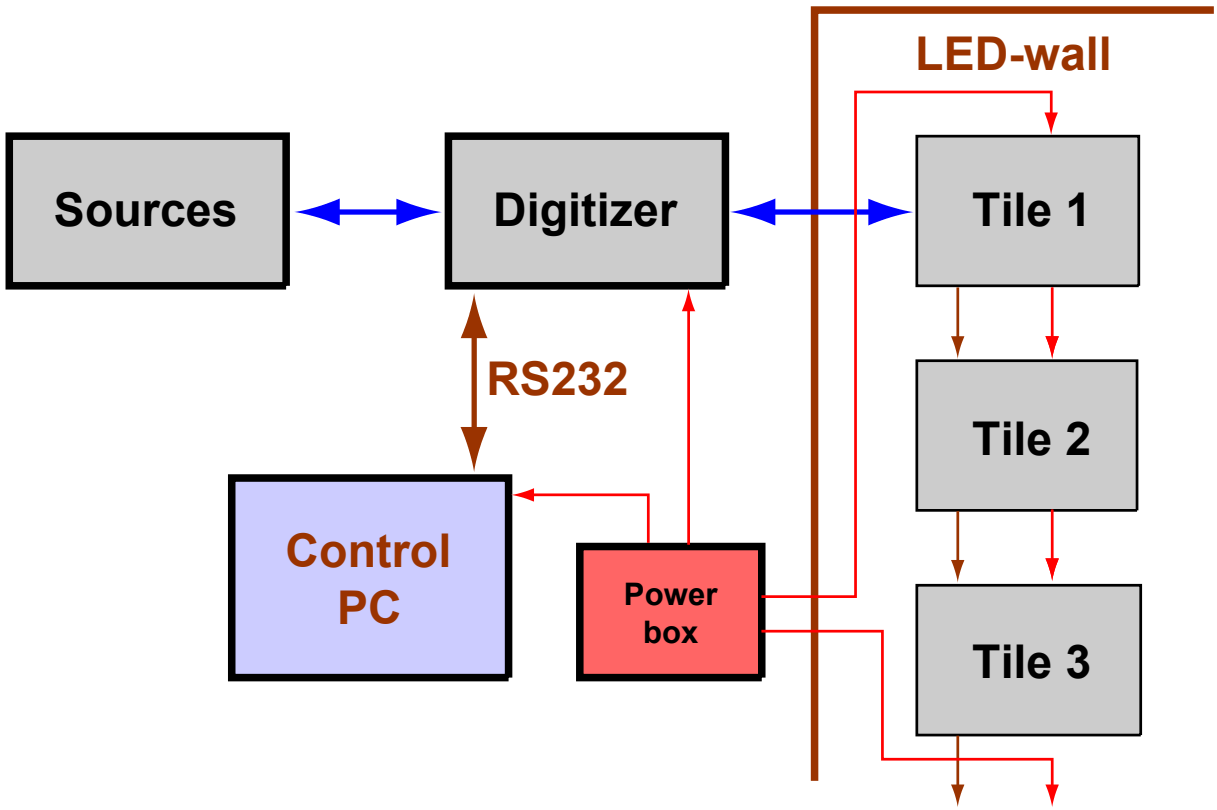


Image 3-1
Block diagram OLite display system.

4. COMPONENTS OF AN OLITE RENTAL TILE

General introduction

The OLite rental tile has a rugged frame where OLite modules fit into to form one display tile. These modules are connected via a cable string with the OLite control box mounted inside the OLite rental frame. The control box has a MDR input and a MDR output port to connect the OLite rental tile with the neighboring tiles in the display.

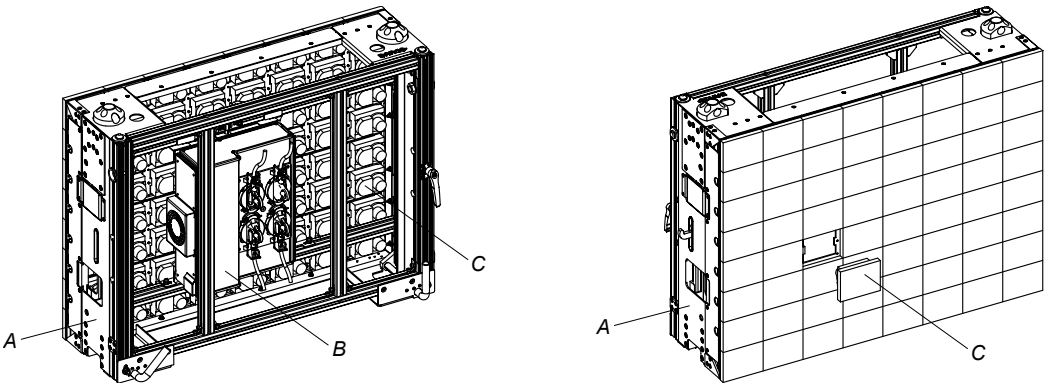


Image 4-1
OLite 510 rental tile (**R9010330**)

A OLite 510 rental frame.
B OLite control box.
C OLite 510 module.

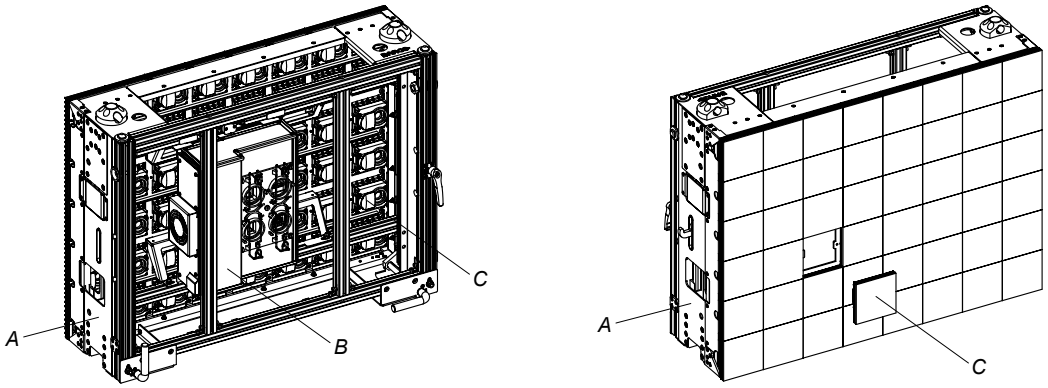


Image 4-2
OLite 612 rental tile (**R9010410**)

A OLite 612 rental frame.
B OLite control box.
C OLite 612 module.

The following chapters describe and illustrate these three main components (OLite rental frame, OLite module and OLite control box) more in detail.

Overview

- OLite rental frame
- OLite module
- OLite control box

4.1 OLite rental frame

Introduction OLite rental frame

The OLite rental frame is made out of aluminium profiles and stainless steel to reduce weight without losing strength. This strong frame allows you to build OLite LED-walls up to 12 frames high stacked or 15 tiles high trussed. The front of the OLite rental frame has a grid where OLite modules fit in forming 4 chains.

The top of the OLite rental frame is equipped with two big cones for easy and fast positioning of the upper rental frame. The bottom corners of the OLite rental frame contain a solid locking mechanism operated with a fixed rugged handle, no tools required. These locking mechanisms and the big cones ensure a fast and secure attachment between the upper and lower tile. The rear right side of the OLite rental frame is equipped with a smaller rugged handle which operates the side locking mechanism to secure the rental tiles sideways with the neighboring tile.

All sides of the OLite rental frame are provided with small positioning cones and planes to ensure a precise positioning between the tiles. It's important to keep those cones and planes clean, otherwise seams will be visible after installation of the rental frame into the LED-wall.

The left and right rear sides of the OLite rental frame contain two holes which are used to install the stacker system in case of a base stand OLite display configuration. A mounting plate for the OLite control box is attached inside the OLite rental frame. This mounting plate with control box can easily be removed without tools to allow fast servicing of the rental tile. Furthermore the left and right side of the frame are equipped with a fold out carrying handle.

Parts location of the OLite rental frame

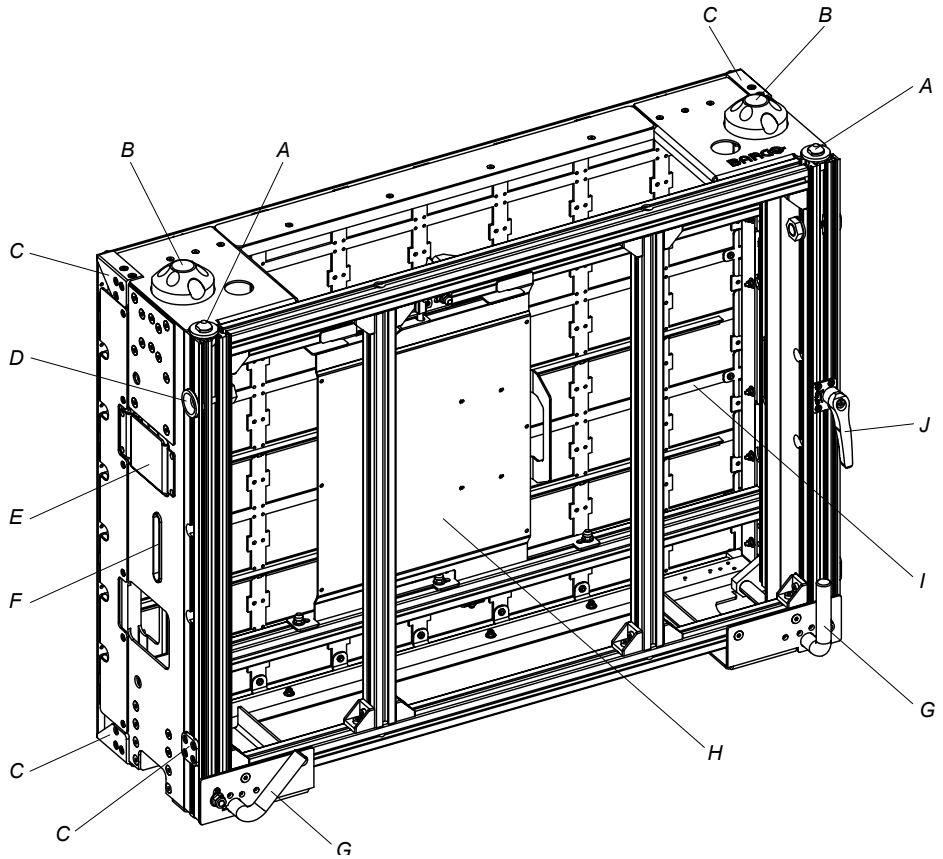


Image 4-3
OLite rental frame (OLite 510: **R9853010** ; OLite 612: **R9853418**).

A Small positioning cone.
B Big positioning cone.
C Positioning plane.
D Receiver for small positioning cone.
E Carrying handle.
F Receiver for side locking mechanism.
G Rugged handle for operating top-bottom locking mechanism.
H Removable mounting plate for OLite control box.
I Grid to snap in the OLite modules.
J Small handle for operating side locking mechanism.

4.2 OLite module

Introduction OLite module

The front of an OLite module consists of a matrix of full color SMD LED's enclosed by a shader and sheltered in an IP65 housing. The rear of the OLite module is equipped with two positioning pins and two snap-in latches which enable a precise and fast attachment into the support grid. Furthermore the rear contains a heat sink provided with an external fan (IP54) which starts to run when the internal temperature exceeds a specific value. Two LED's, located just below the external fan, indicate the status of the OLite module. An OLite module has only one connector socket. Power and data are passed through this circular waterproof (IP65) connector.

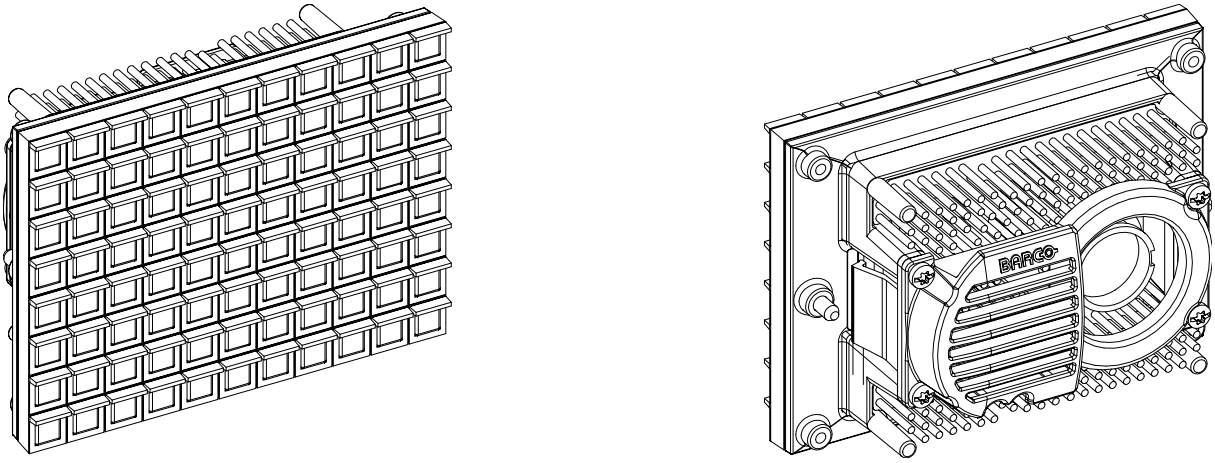


Image 4-4
OLite 510 module (**R9853020**).

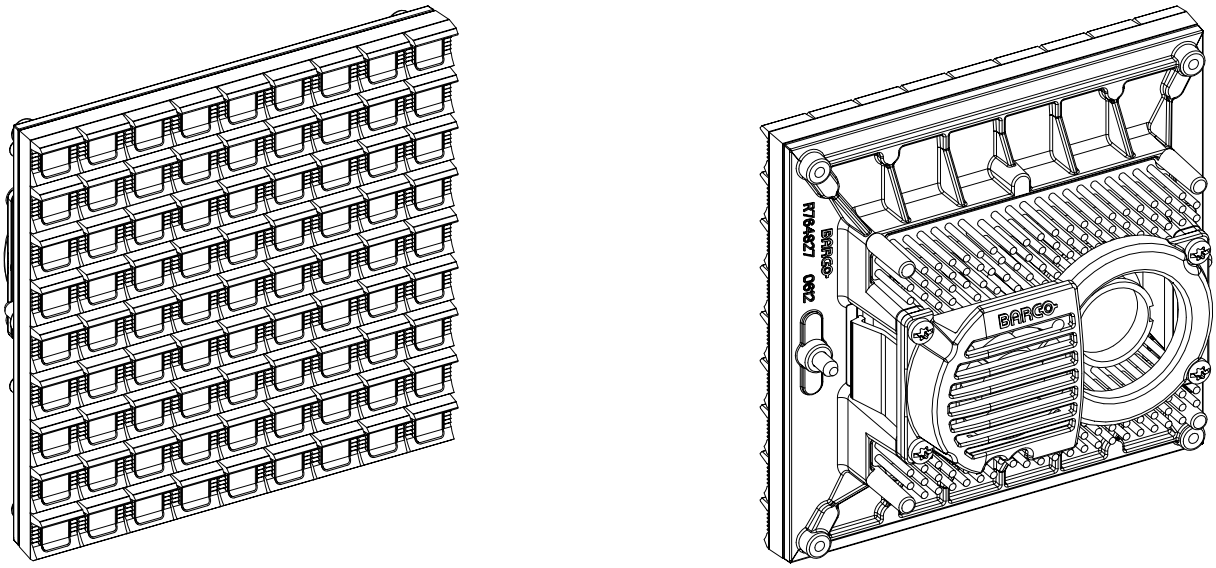


Image 4-5
OLite 612 module (**R9853407**).

Parts location of an OLite 510 module

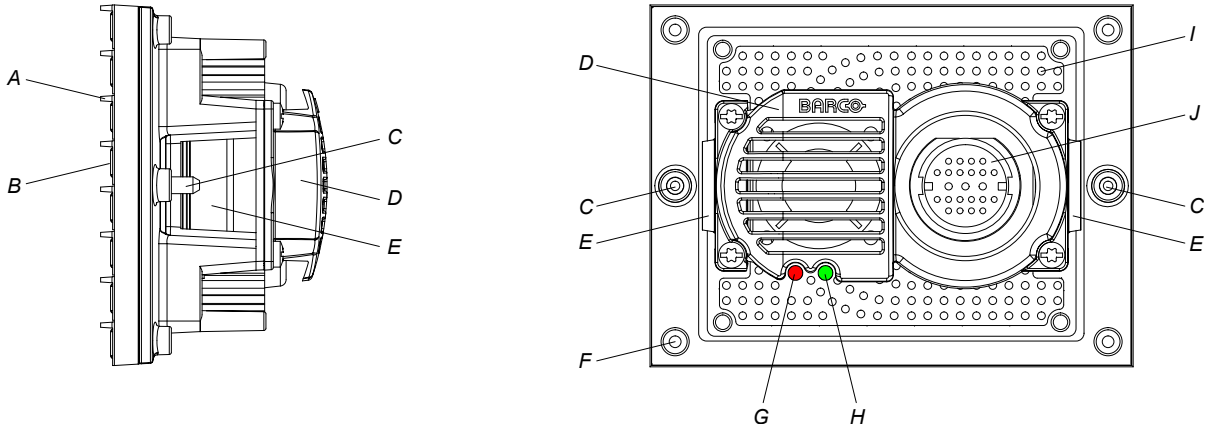


Image 4-6
OLite 510 module (**R9853020**).

A Shader.
B Full color LED.
C Module positioning pin.
D External fan cover.
E Snap-in latch.
F Hole for thread rolling screw M3.
G Red status LED.
H Green status LED.
I Heat sink.
J Power/data connector.

Parts location of an OLite 612 module

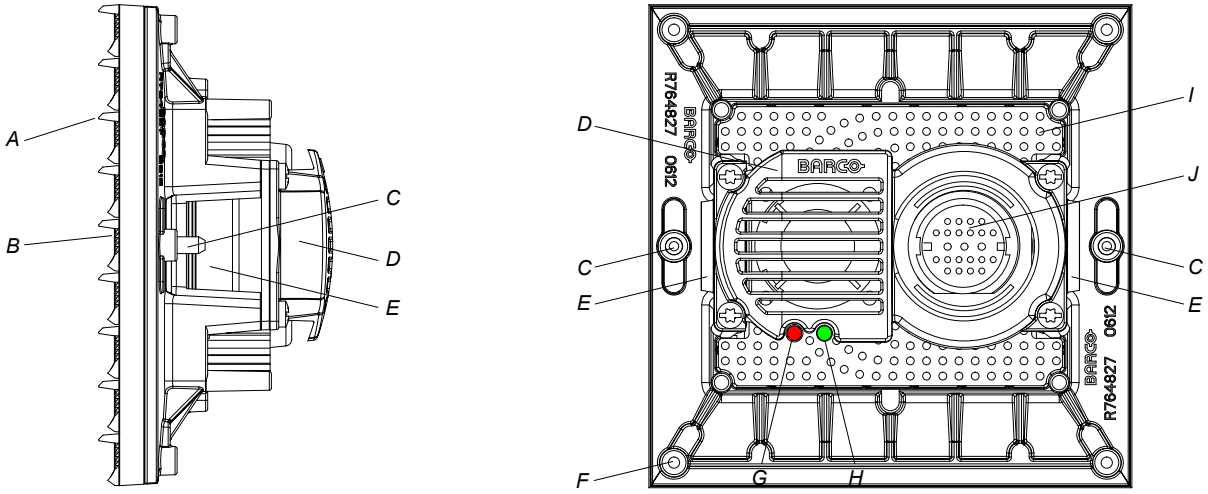


Image 4-7
OLite 612 module (**R9853407**).

A Shader.
B Full color LED.
C Module positioning pin.
D External fan cover.
E Snap-in latch.
F Hole for thread rolling screw M3.
G Red status LED.
H Green status LED.
I Heat sink.
J Power/data connector.

CAUTION: Handle the OLite modules with care. Note that the foil, covering the LED's, is made of thin polycarbonate. This foil ensures that the OLite module has an IP65 protection rating.

Cables used with an OLite module

The interconnection between the OLite modules is done with a custom designed cable string. There are two cable strings available for OLite rental tiles. One for connecting 16 OLite 510 modules with each other and one for connecting 12 OLite 612 modules with each other. The plugs on the cable string have a quarter turn locking mechanism which ensures a watertight (IP65) connection with the OLite module or OLite control box.

Image 4-8
Cable string for 16 OLite 510 modules (**R9853090**).

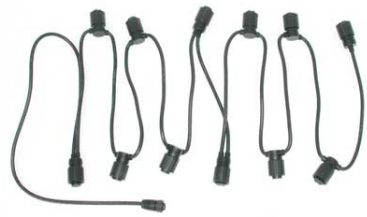


Image 4-9
Cable string for 12 OLite 612 modules (**R9853419**).

An OLite module dummy plug can be used to seal one of the plugs of the OLite cable string.

Image 4-10
OLite module dummy plug (5 pieces: **R98530805**).

Image 4-11
Plug on cable string sealed with OLite module dummy plug.

4.3 OLite control box

Introduction OLite control box

The OLite control box contains a power supply unit, a distribution interface and a controller/re-sync unit. All together assembled in an IP65 housing. The control box is attached to a mounting plate which makes the replacement of the hole unit, mounting plate with control box, very easy and without tools.

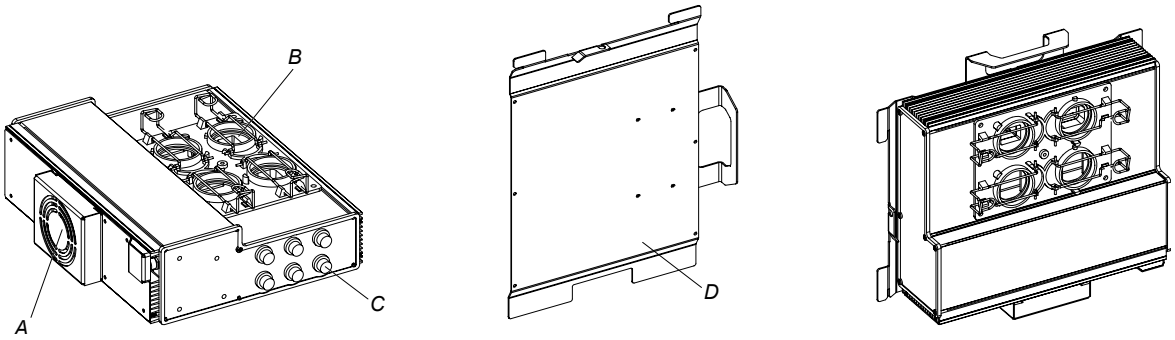


Image 4-12

A External fan.
B Standard outdoor connector ports.
C Power/data output ports.
D Mounting plate.

The power supply requires an input voltage between 200 and 240 volt AC. The distribution interface has 6 output ports to connect a string of OLite modules by using an OLite cable string. The re-sync unit contains the standard Barco LED-wall outdoor connector ports to link the data and power from tile to tile.

Input/output ports of the OLite control box

The illustration below shows the different connection ports of the OLite control box. At the left side of the illustration you can see the front view of the OLite control box with the power/data input/output ports used to realize the power and data connections from tile to tile. At the right side of the illustration below you can see the bottom view of the OLite control box with the six power/data output ports where a cable string can be plugged into, leading to the OLite modules.

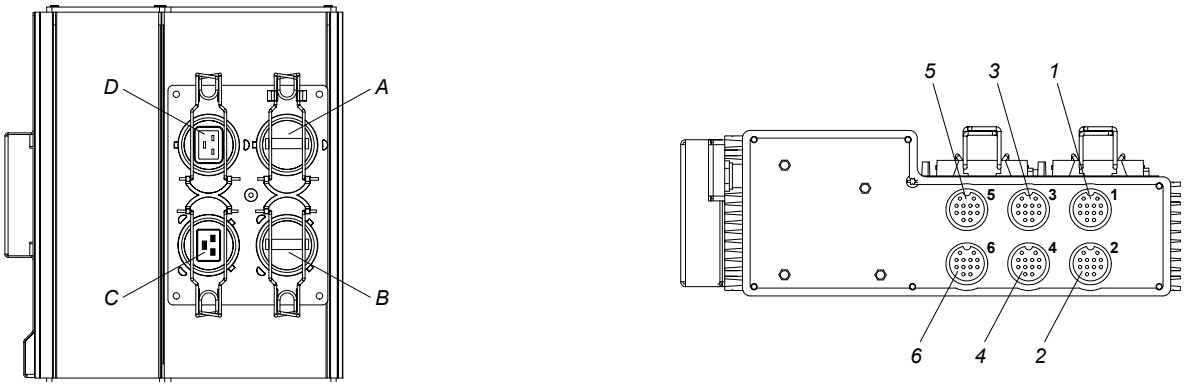


Image 4-13

A Data output port.
B Data input port.
C Power input socket.
D Power output socket.
1 Power/data output port number 1 (to first string of OLite modules).
2 Power/data output port number 2 (to second string of OLite modules).
3 Power/data output port number 3 (to third string of OLite modules).
4 Power/data output port number 4 (to fourth string of OLite modules).
5 Power/data output port number 5 (to fifth string of OLite modules).
6 Power/data output port number 6 (to sixth string of OLite modules).

Each output port can place a dedicated color upon the OLite modules. This makes the identification of the OLite module strings easier.

- Port 1 : Red
- Port 2 : Green
- Port 3 : Blue
- Port 4 : White
- Port 5 : Magenta
- Port 6 : Cyan

In a standard OLite rental tile the power/data output ports number 5 and 6 are not used but sealed with a cover (Z3499467). Four strings of OLite modules are sufficient to fill the grid of an OLite rental frame.

Using an OLite control box as stand alone re-sync unit

The OLite control box acts like a stand alone re-sync unit in case no power is applied to the power input socket of the control box. When you use the OLite control box as stand alone re-sync unit ensure to place dummy plugs upon the power input and output sockets. Maximum connect three (3) stand alone re-sync units in series. The cable length used between two control boxes may not exceed 5 meter.

Power cables used between OLite control boxes

To meet the demands of each OLite application Barco offers several lengths of power cables to link power from control box to control box. Note that the power output port of the last OLite control box in the power chain has to be sealed with a dummy power plug.

Image 4-14
Power link cable of 0,8 meter (**R9851760**).

Image 4-15
Power link cable of 1,5 meters (**R9850241**).

Image 4-16
Power link cable of 4,5 meters (**R9850150**).

Image 4-17
Power link cable of 9 meters (**R9850260**).

Image 4-18
Dummy power plug (**R9850280**).

Data cables used between OLite control boxes

To meet the demands of each OLite application Barco offers several lengths of data cables to link data from control box to control box. Note that the data output port of the last OLite control box in the data chain has to be sealed with a dummy data plug.

Image 4-19
Data linking cable of 1,5 meters (**R9850210**).

Image 4-20
Data linking cable of 5 meters (**R9850220**).

Image 4-21
Dummy data plug (**R9850270**).

Cover for unused power/data output ports

Image 4-22
Cover for unused output ports of the OLite control box (20 pieces: **R9853031**)

5. OLITE RENTAL PERIPHERALS AND ACCESSORIES

Overview

- OLite rental flight case
- OLite rental base stand setup accessories
- OLite rental truss setup accessories
- Power boxes
- Digitizer
- Fiberlink system
- Control software

5.1 OLite rental flight case

Introduction of the OLite rental flight case

The OLite rental flight case holds up to 4 tiles and is specially designed to enable fast build up directly from flight case to display. The tiles inside the flight case are separated with a removable partition plate. This plate protects the LED-side of the OLite rental tile while moving the tiles in or out the flight case. The floor of the flight case wagon is equipped with eight big tile positioning cones, so the rental frames can easily be placed upon the wagon and secured for transport. The four castor wheels and the eight handles make the OLite rental flight case easy to handle.

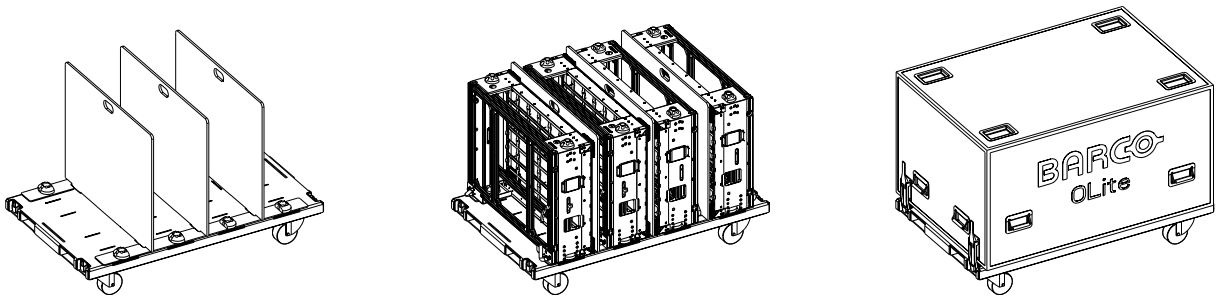


Image 5-1
OLite rental flight case (**R9853070**).

The dimensions of the OLite flight case are optimal for maximum utilization of the floor area of a truck. Furthermore, the top side of the flight case cover has four stacking dishes which allow to stack the OLite flight cases.

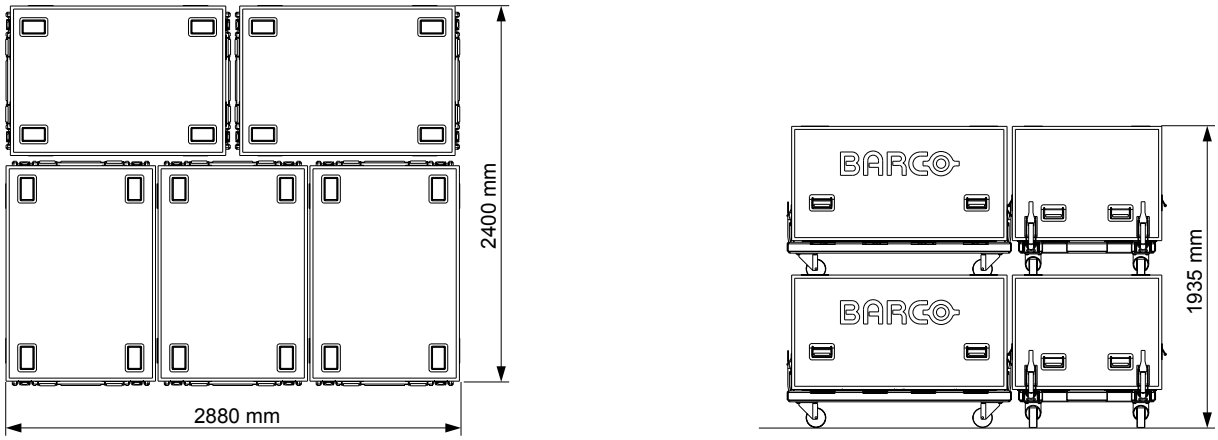


Image 5-2
Dimensions of optimally stored OLite rental flight cases.

WARNING: Maximum stack two (2) OLite rental flight cases high. Never higher.

Parts location of the OLite rental flight case

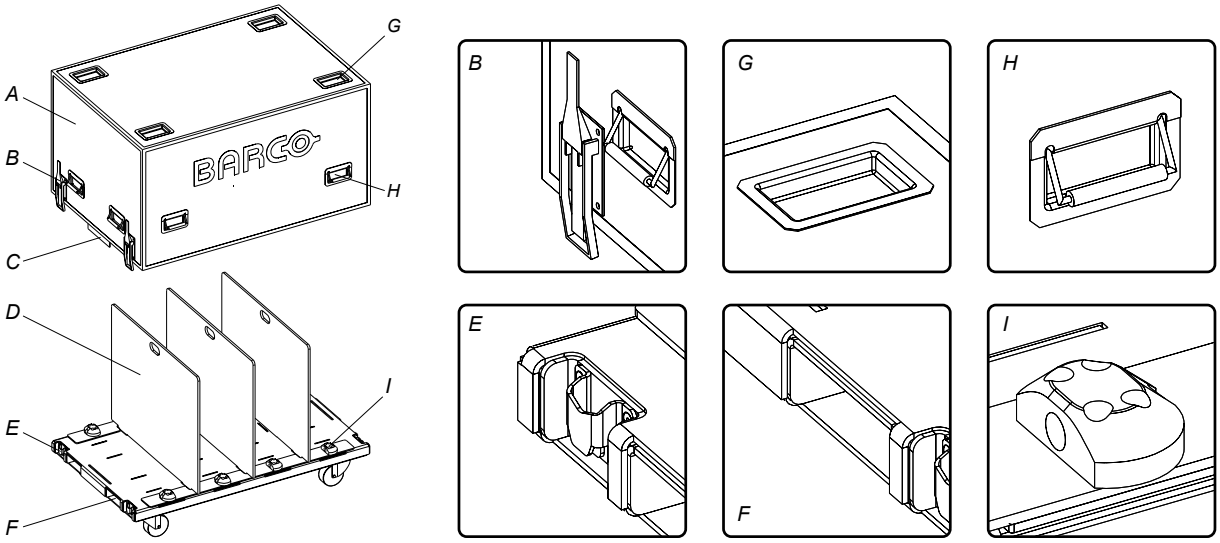


Image 5-3

A Flight case cover.
B Cover locking handle.
C Cover positioning strip.
D Removable partition plate.
E Cover locking receiver.
F Forklift slot.
G Stacking dish.
H Carrying handle.
I Tile positioning cone.

5.2 OLite rental base stand setup accessories

Base stand setup accessories

To setup an OLite rental display in a base stand configuration, additional mounting accessories are required as there are the foot beams, the OLite rental foot and the OLite rental stacker. These accessories are easy to install with a minimum of tools. One column of OLite rental tiles is built upon one OLite rental foot. The rental foot is mounted upon two foot beams. Depending on the height of the OLite display longer foot beams must be used. One stacker profile captures a height of two OLite rental tiles. The maximum height of a base stand OLite rental display is 12 tiles high, so up to 6 stacker profiles.

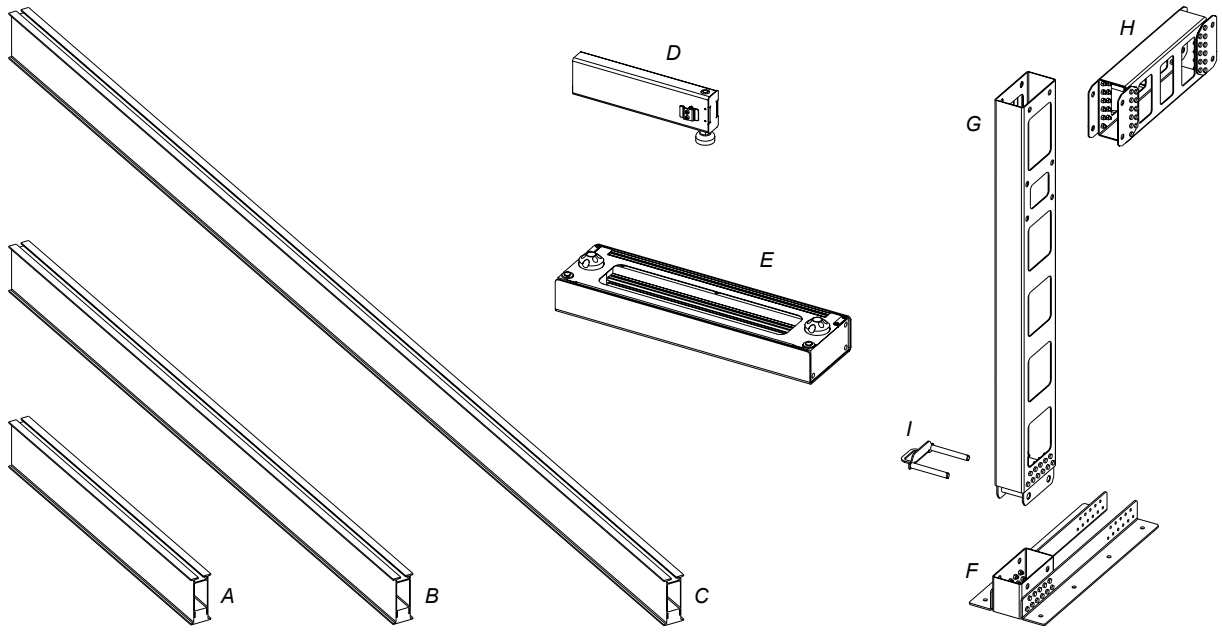


Image 5-4

A Foot beam of 1,2 meters.
B Foot beam of 2,4 meters.
C Foot beam of 4 meters.
D Adjustable foot.
E OLite rental foot.
F Stacker foot.
G Stacker profile.
H Stacker bridge.
I Stacker locking key.

5.3 OLite rental truss setup accessories

Truss setup accessories

OLite truss beams are required to set up an OLite rental display in a hanging configuration. Barco offers two sizes of OLite truss beams, namely the “OLite single truss beam” and the “OLite dual truss beam”. The single truss beam covers a width of one OLite rental tile and the dual truss beam covers two tiles. The OLite truss beam has the same locking mechanism as the OLite rental frames. Each truss beam is equipped with one big hoist eyebolt, used to lift up the display, and two smaller safety eyebolts to secure the truss beam with the truss installation.

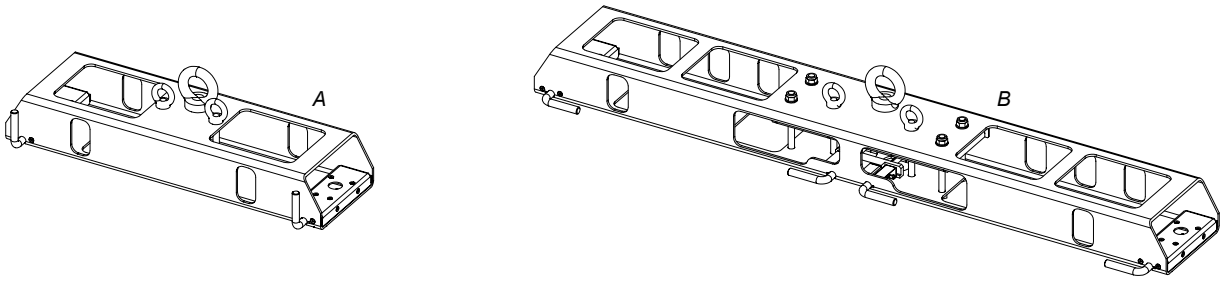


Image 5-5
A OLite single truss beam (**R9853060**).
B OLite dual truss beam (**R9853040**).

The OLite single truss beam can also be used as a tool to lift up and install the OLite rental tiles one by one in a base stand OLite display.

Parts location of the OLite truss beam

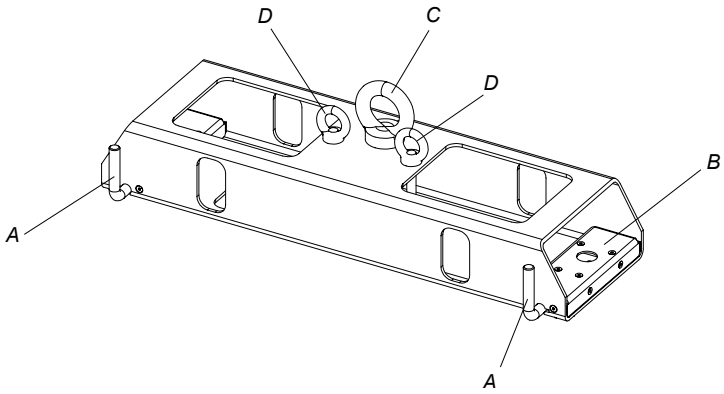


Image 5-6
A Locking handle.
B Locking mechanism.
C Big hoist eyebolt for lifting.
D Small safety eyebolt for securing.

WARNING: Maximum weight limit of the single truss beam is 960 kg, the dual truss beam can maximum lift 1920 kg. This weight corresponds with a maximum display height of 15 tiles. Do not put any additional weight on the truss beam and use the truss beams only in conjunction with Barco’s OLite rental frames.

WARNING: Always secure all truss beams of a hanging OLite rental display with the truss installation. Use therefore the safety eyebolts. One safety eyebolt has a maximum loading capacity of 960 kg. Secure each eyebolt with an independent safety cable. Never loop a safety cable through both safety eyebolts of a truss beam, as this will dramatically reduce the load holding capacity of the safety eyebolts.

5.4 Power boxes

General

To ensure safe and reliable operation of the OLite , a suitable system for AC power distribution must be used. Though 3rd. party solutions may be used, several sizes and types of power distributions are available from Barco. For smaller system the “Mono Phase Power Box” can be used, medium sized system may use on of several custom power box solutions. We also offer power distribution systems in a flight case for rental and touring applications.

Image 5-7
Mono phase power box.

Image 5-8
Custom power box.

Image 5-9
Rental power box.

CAUTION: Refer to the manual(s) of the used power box for more information about installation and usage guidelines.

5.5 Digitizer

General

The digitizer processes (image processing, conversion and conditioning) all source signals for digital distribution to every tile. The digitizer can be accessed directly or via the control software (e.g. Director toolset). This software is designed as a user interface to be used in conjunction with the digitizer and display. It can be used on a PC that's connected to the digitizer through a serial RS232 connection.

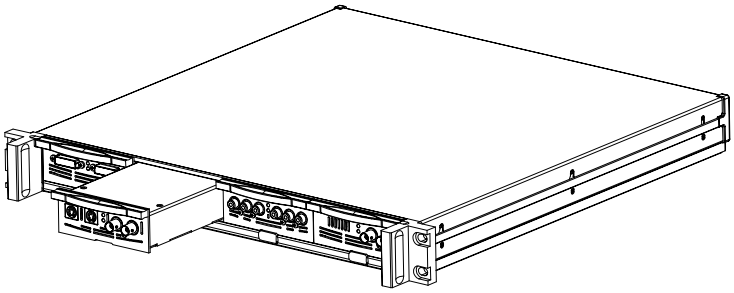


Image 5-10
D320 PL digitizer.

CAUTION: Refer to the manual(s) of the used digitizer for more information about installation and usage guidelines.

5.6 Fiberlink system

General

If the distance between the digitizer and the LED-wall exceeds 5 meters, a fiber optic connection must be used to ensure signal integrity and system reliability. Barco offers two complete system solutions including transmitter, fiber and receiver. The choice of system depends on the length of cable required.

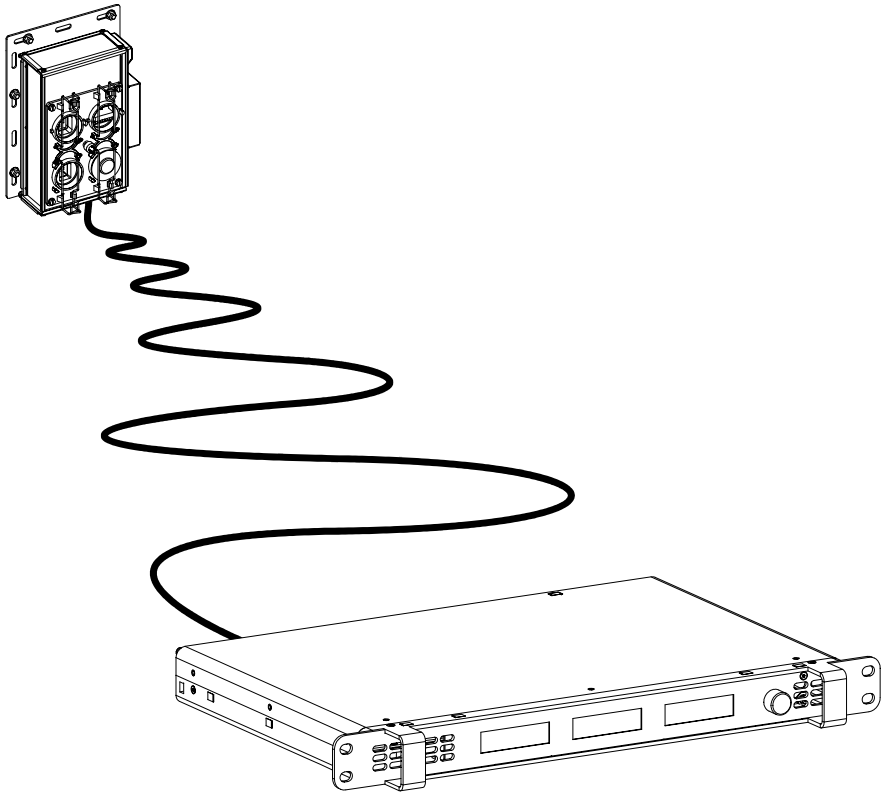


Image 5-11
“Fiberlink 2” transmitter and receiver.

CAUTION: Refer to the manual(s) of the used fiberlink system for more information about installation and usage guidelines.

5.7 Control software

General

The control software is designed as a graphic user interface (GUI) and can be used to control and configure the digitizer as well as the Barco LED wall via a PC (e.g. Director toolset).

Minimum required software version: 1.06

Image 5-12
Control software “Director toolset”.

CAUTION: Refer to the manual(s) of the used control software for more information about installation and usage guidelines.

6. SET UP PROCESS OF AN OLITE RENTAL DISPLAY

About this chapter

This chapter describes roughly the installation process of the OLite rental display for a base stand (floor mount) or truss (hanging) configuration. Several process stages refer to one or more of the detailed "Basic set up procedures", page 37.

Floor mount or hanging OLite rental display

The OLite rental tiles can be used in a floor mount or in a hanging rental configuration. These configurations are limited in height, maximum 12 tiles high for a floor mount and maximum 15 tiles high for a hanging configuration. Furthermore, a floor mount (base stand) configuration requires a stacker system to ensure the stability of the display.

Overview

- Set up of a floor mount OLite rental display
- Set up of a hanging OLite rental display

WARNING: Safety first. Fence off the installation area before starting to install your OLite rental display. Ensure you read, understand and follow all safety instructions mentioned in the chapter "Safety", page 3, of this installation manual. Furthermore, make sure that all installation requirements for your OLite rental display are fulfilled, see "Installation requirements", page 9.

6.1 Set up of a floor mount OLite rental display

Set up process

1. Installation of the foot beams and OLite rental feet. See detailed procedure "Install the OLite rental feet", page 41.
2. Installation of the adjustable feet. Note that this is optional. See procedure "Install an adjustable foot", page 43 for detailed installation instructions.
3. Build up the floor mount (base stand) OLite rental display as described in procedure "Build up a floor mounted OLite rental display", page 50.
   Warning: *The maximum height of a base stand OLite rental display is 12 tiles high.*
4. Installation of the required power box(es). See manual of the used power box for more information about installing the power box(es).
5. Power cabling of the OLite rental display. See chapter "Power cabling of an OLite rental display", page 60.
6. Installation of the digitizer(s) and, if used, the fiberlink and/or AEC. Follow the installation guidelines in the manuals of these products.
7. Data cabling of the OLite rental display. See chapter "Data cabling of an OLite rental display", page 61.
8. Installation of the control software for the OLite rental display. See installation procedure described in the manual of the control software.
9. Energize the OLite rental display and start up the control software. For more information about showing content on the OLite display see manual of the control software.

6.2 Set up of a hanging OLite rental display

Set up process

1. Build up the truss installation.
   Warning: *Make sure that the truss installation, on which you want to hang the OLite rental display, complies with the local regulations regarding such installations and that the truss installation will be able to support the complete load of the OLite rental display.*
2. Build up the hanging (trussed) OLite rental display as described in procedure "Build up a hanging OLite rental display with truss beams", page 53.
   Warning: *The maximum height of a hanging OLite rental display is 15 tiles high.*
3. Installation of the required power box(es). See manual of the used power box for more information about installing the power box(es).
4. Power cabling of the OLite rental display. See chapter "Power cabling of an OLite rental display", page 60.
5. Installation of the digitizer(s) and, if used, the fiberlink and/or AEC. Follow the installation guidelines in the manuals of these products.
6. Data cabling of the OLite rental display. See chapter "Data cabling of an OLite rental display", page 61.
7. Installation of the control software for the OLite rental display. See installation procedure described in the manual of the control software.
8. Energize the OLite rental display and start up the control software. For more information about showing content on the OLite display see manual of the control software.

7. BASIC SET UP PROCEDURES

About this chapter

This chapter contains all installation procedures necessary to set up an OLite rental display. These procedures describe, with detailed step by step actions and illustrations, how to install an OLite rental display in a floor mount or hanging configuration. Some of the procedures are redundant either for a floor mount or a hanging configuration. See chapter "Set up process of an OLite rental display", page 33, to follow the correct order of procedures required to set up your OLite rental display in the configuration of your choice.

Overview

- Remove OLite rental tiles out of the flight case
- Place OLite rental tiles into the flight case
- Install the OLite rental feet
- Install an adjustable foot
- Attach an OLite truss beam upon an OLite rental tile
- Attach an OLite rental tile upon an OLite rental foot
- Attach OLite rental tiles on top of each other
- Attach OLite rental tiles next to each other
- Install an OLite stacker system
- Build up a floor mounted OLite rental display
- Build up a hanging OLite rental display with truss beams
- Secure a hanging OLite rental display

7.1 Remove OLite rental tiles out of the flight case

Necessary tools

- OLite single truss beam.
- Hoisting equipment.

How to remove the OLite rental tiles out of the flight case ?

1. Open the four lock handles of the flight case.
2. Remove the flight case cover by lifting it up vertically.
   Warning: *At least 2 persons are required to lift up the cover of the flight case.*

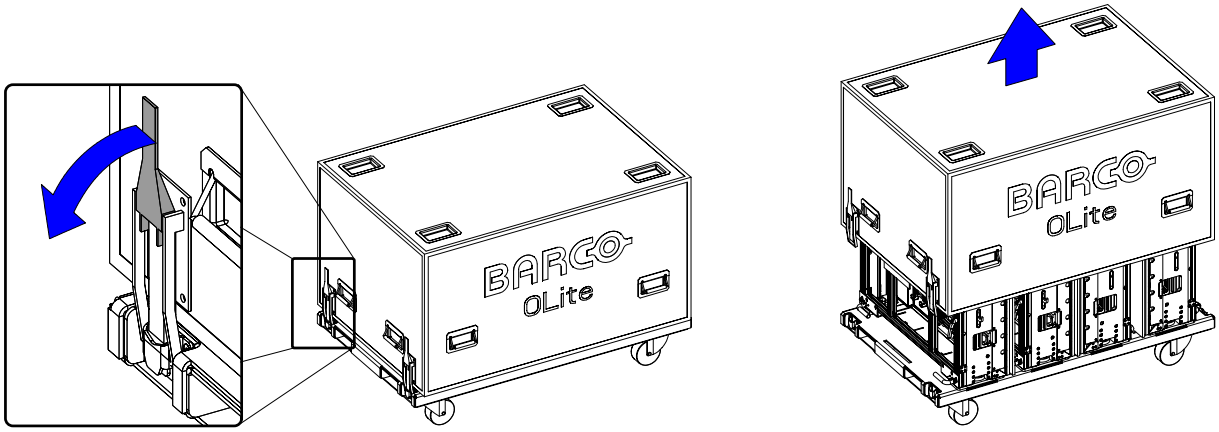


Image 7-1
Remove flight case cover.

3. Unlock one of the outer OLite rental tiles by turning the handles of the tile locking mechanisms upwards.
4. Grasp the unlocked OLite rental tile by the carrying handles and lift it vertically out of the flight case.
   Warning: *At least 2 persons are required to lift up an OLite rental tile.*

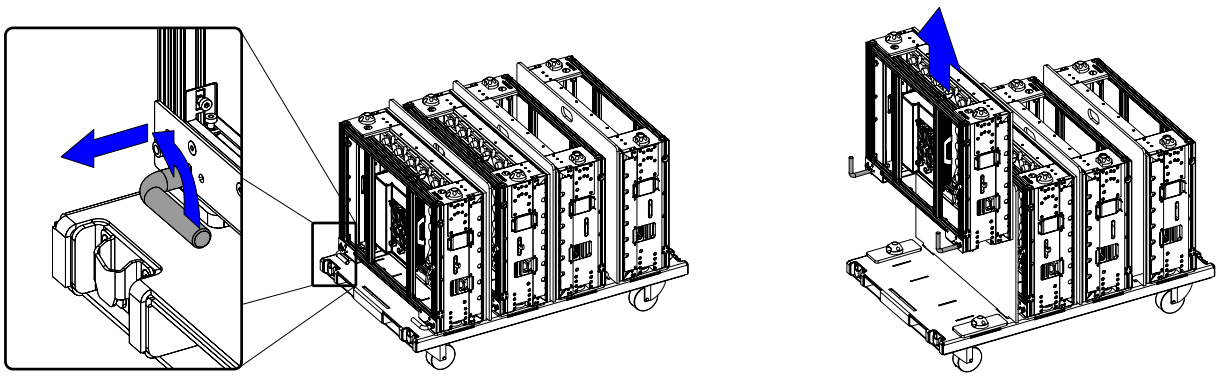


Image 7-2
Unlock outer tile in flight case and lift the tile up.

Tip: *You can use a hoisting crane to lift up the OLite rental tile. First attach an OLite truss beam upon the OLite rental tile and then lift up the truss beam.*

5. Repeat from step 3 until all OLite rental tiles are removed.
   Caution: *The partitions can be removed for easy access to the OLite rental tiles, but ensure there is always a partition present between the outgoing tile and the remaining tiles in the flight case. Those partitions protect the shaders and LED's while moving the OLite rental tiles in or out the flight case.*

7.2 Place OLite rental tiles into the flight case

Necessary tools

- OLite single truss beam.
- Hoisting equipment.

How to place OLite rental tiles into the flight case ?

1. Place an empty open flight case trolley on a level surface to ensure the load will be evenly spread out among the wheels.
2. Turn the handles of the locking mechanism of the OLite rental tile, you want to place upon the trolley, in the unlocked position.
3. Grasp the OLite rental tile by the carrying handles and place it upon the flight case trolley with the LED's facing the centre of the flight case. Start with one of the middle positions on the flight case trolley.
   Warning: *At least 2 persons are required to lift up an OLite rental tile.*

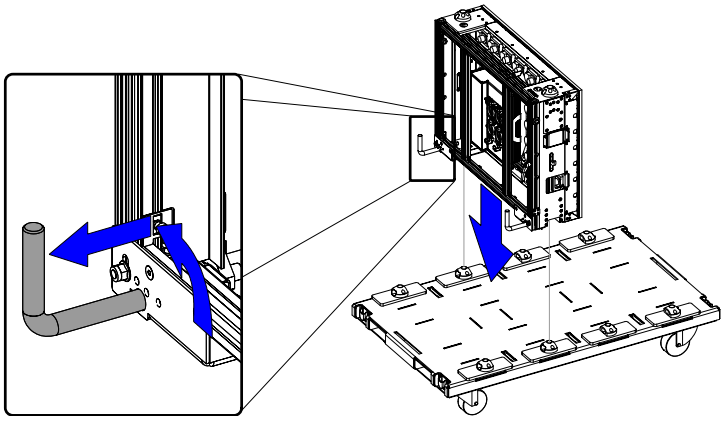


Image 7-3
Place first tile on flight case trolley.

Tip: *You can use a hoisting crane to lift up the OLite rental tile. First attach an OLite truss beam upon the OLite rental tile and then lift up the truss beam.*

4. Secure the OLite rental tile with the flight case trolley by turning the handles of the locking mechanism in the locked position.

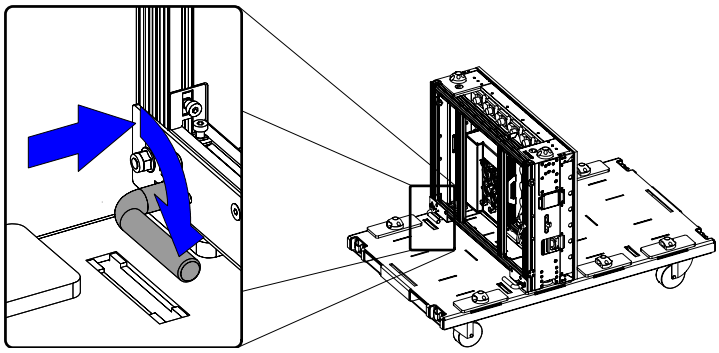


Image 7-4
Secure the OLite rental tile with the flight case trolley.

5. Place a partition plate at the front and at the back of the secured OLite rental tile. This is necessary to protect the OLite rental tile while placing other tiles on the flight case trolley.

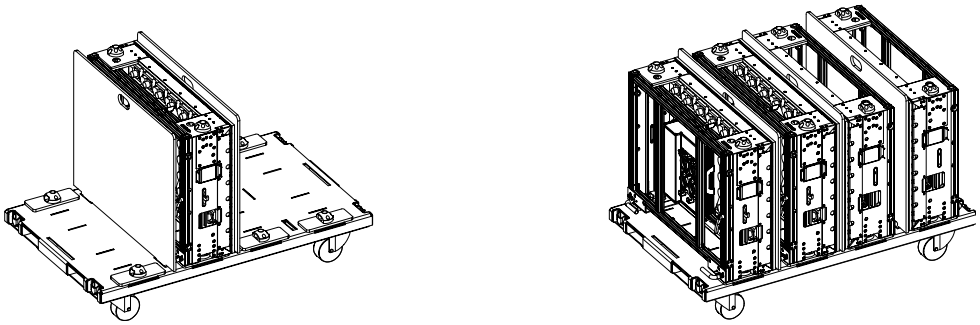


Image 7-5
Place a partition plate at the front and at the back of the tile before placing an other tile.

6. Repeat from step 2 until the flight case is filled with four secured and protected OLite rental tiles.

7. Place the flight case cover on the flight case trolley and close all four lock handles.
   Warning: *At least 2 persons are required to lift up the cover of the flight case.*

7.3 Install the OLite rental feet

Necessary tools

- 19 mm wrench.
- Spirit level.

Necessary parts

- OLite rental feet.
- 2 foot beams per rental foot.
- Four M12 bolts per rental foot.
- Shim plates.

How to install the OLite rental feet ?

1. Place two foot beams parallel per OLite rental foot on a flat surface.
2. Attach the rental foot rails to the rental foot loosely, using four M12 bolts.

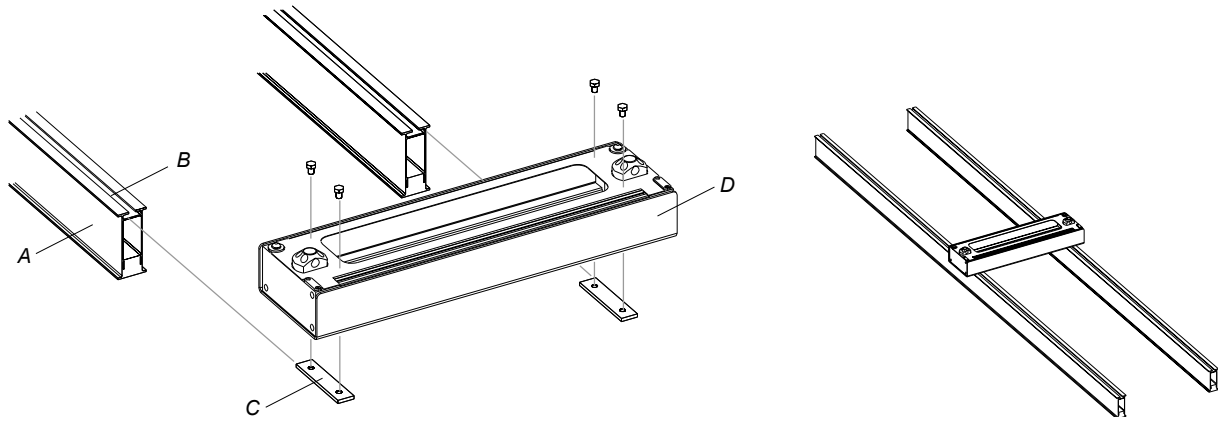


Image 7-6
Install rental foot.

A Foot beam.
B Foot beam slot.
C Rental foot rail.
D Rental foot

3. Slide the rental foot with attached rails into the slots of the foot beams. Ensure the front side of the foot will be at the same side as the LED's.
4. Fasten the four bolts when the rental foot is in the desired position.
5. Assemble such a rental foot assembly per OLite rental column.
6. Place all assemblies next to each other on their final position. leave a small gap, few millimeters, between the rental feet. Ensure the rental feet are correctly and equally oriented.

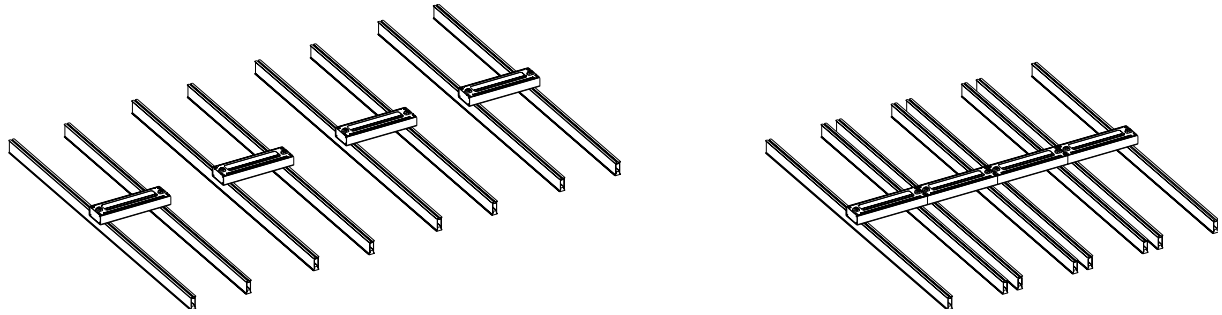


Image 7-7
Place all assemblies next to each other.

7. Level out the foot beams. If necessary place every 50 centimeters shim plates underneath the foot beams. This to prevent that the beams bend.
8. Firmly attach the foot assemblies to the floor with fixings, or ballast, or both as required.

WARNING: Foot beams of LED walls must always be firmly secured to the floor with fixings (preferred) or stabilized with ballast. This to prevent possible tip over and sliding of the LED wall due to wind-force or other external influences.

It is the responsibility of the installer to ensure the stability of the LED wall. Note that the stability of the LED wall depends on different parameters like: wind-force, weight of display, height of display, width of display, length of used foot beams and position of LED wall on foot beams (front - middle ?).

7.4 Install an adjustable foot

Necessary tools

- Allen key size 4 mm
- Hexagon socket size 10 mm

How to install an adjustable foot ?

1. Ensure there are no obstacles to obstruct the smooth placement of the adjustable foot.
2. Slide an adjustable foot into the cross beam.

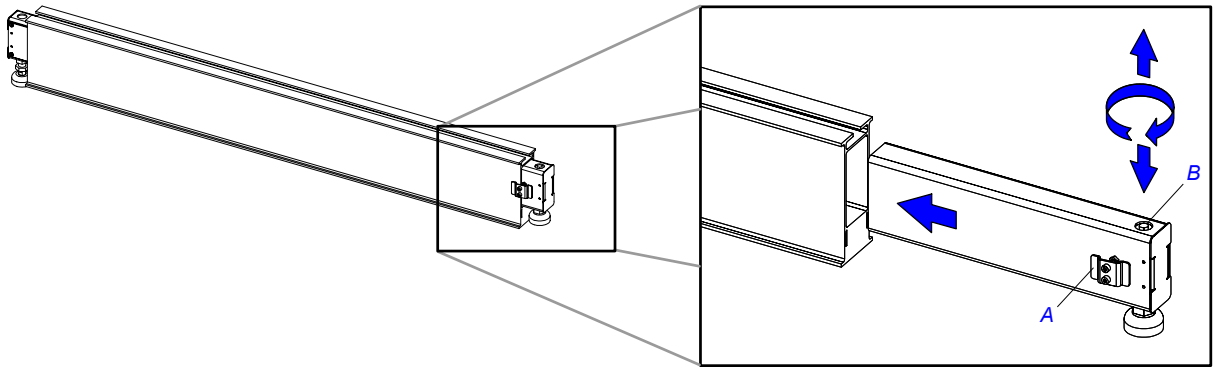


Image 7-8
A Attachment with cross beam.
B Height adjustment.

3. Attach the adjustable foot to the cross beam using an Allen key of 4 mm.
4. Slide an adjustable foot into the other end of the cross beam.
5. Attach this adjustable foot also to the cross beam using an Allen key of 4 mm
6. Adjust the height of the adjustable feet in order to make the cross beam spirit level.
7. Place supporting blocks underneath the beam every 50 centimeters. This to prevent that the beam bends.
   Caution: *Never let the complete weight of the rental display rest on the adjustable foot.*

7.5 Attach an OLite truss beam upon an OLite rental tile

The following procedure is written and illustrated for a single OLite truss beam. The same procedure can be applied for a dual OLite truss beam. Four lock handles instead of two have to be manipulated.

How to attach an OLite truss beam upon an OLite rental tile ?

1. Ensure that the locking mechanisms of the OLite truss beam are unlocked. So, handles in vertical position and pulled out.

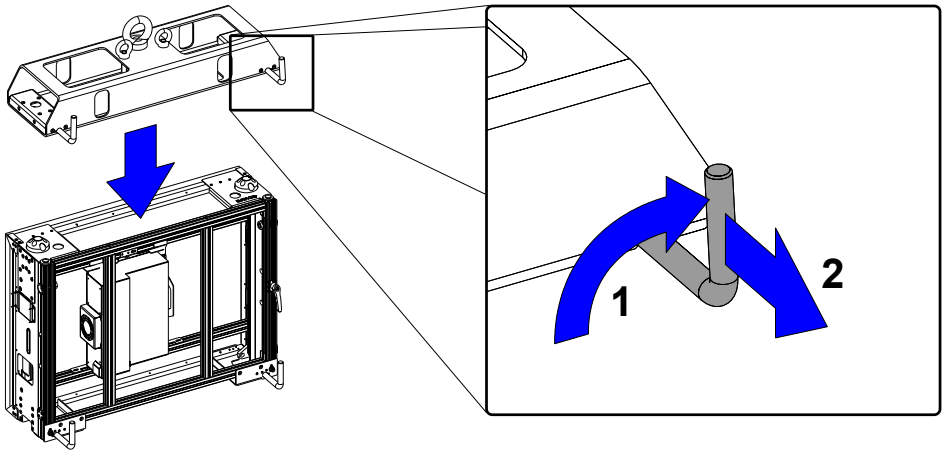


Image 7-9
Place the truss beam locking mechanisms in the unlocked position.

2. Place the OLite truss beam upon the OLite rental tile. Ensure that the truss beam and tile are equally oriented.
3. Lock the truss beam and the tile together by pushing the handles of the truss beam inside and then turning the handles in their horizontal position. The left handle in clockwise direction and the right handle counterclockwise, seen from the rear of the truss beam.

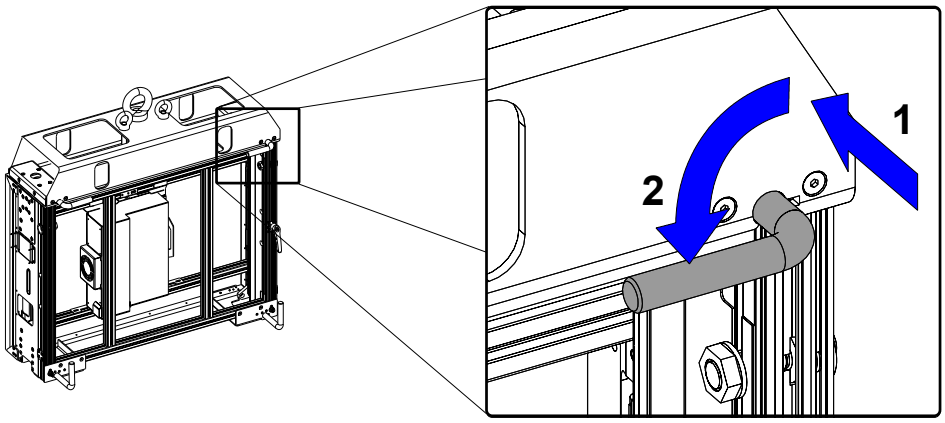


Image 7-10
Place the handles of the truss beam in the locked position.

7.6 Attach an OLite rental tile upon an OLite rental foot

How to attach an OLite rental tile upon an OLite rental foot ?

1. Ensure that the OLite rental foot is installed well to support the OLite rental tiles.
2. Ensure that both locking mechanisms at the bottom of the OLite rental tile are unlocked. So, handles in vertical position and pulled out.

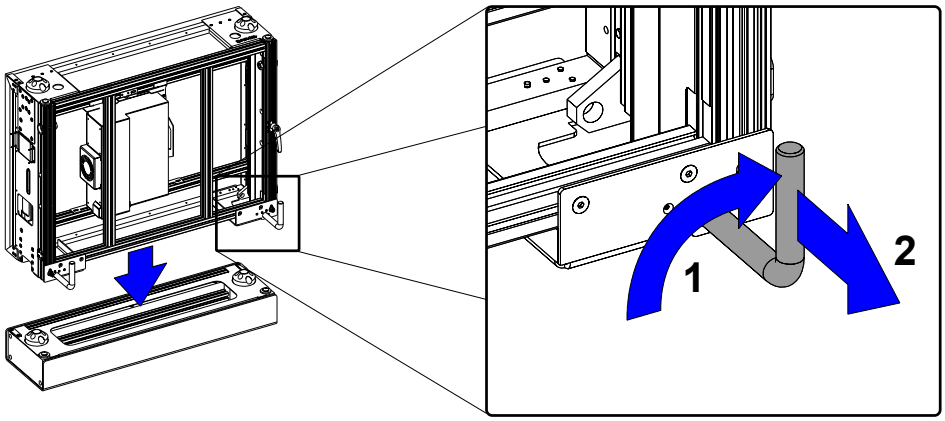


Image 7-11
Place the tile locking mechanisms in the unlocked position.

3. Place the OLite rental tile upon the OLite rental foot. Ensure that the tile and the foot are equally oriented.
   Tip: *Use an OLite truss beam in combination with hoisting equipment to lift up the OLite rental tile.*
4. Lock the tile and the foot together by pushing the handles of the tile inside and then turning the handles in their horizontal position. The left handle in clockwise direction and the right handle counterclockwise, seen from the rear of the rental tile.

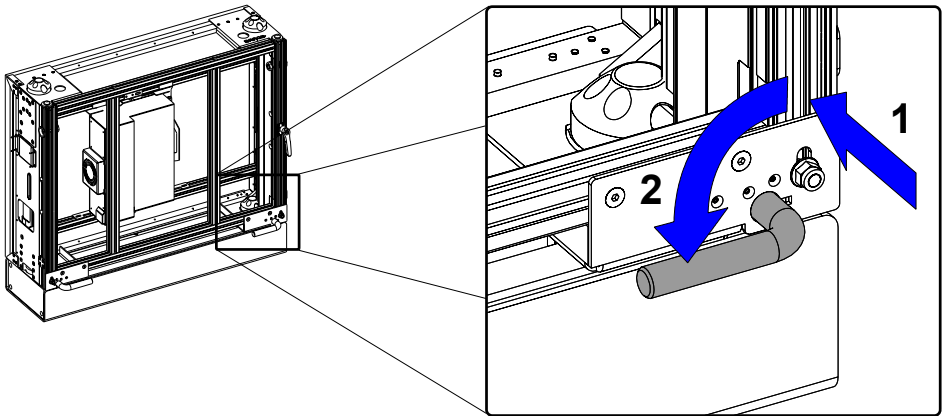


Image 7-12
Place the handles in the locked position.

7.7 Attach OLite rental tiles on top of each other

How to attach OLite rental tiles on top of each other ?

1. Ensure that both locking mechanisms at the bottom of the OLite rental tile are unlocked. So, handles in vertical position and pulled out.

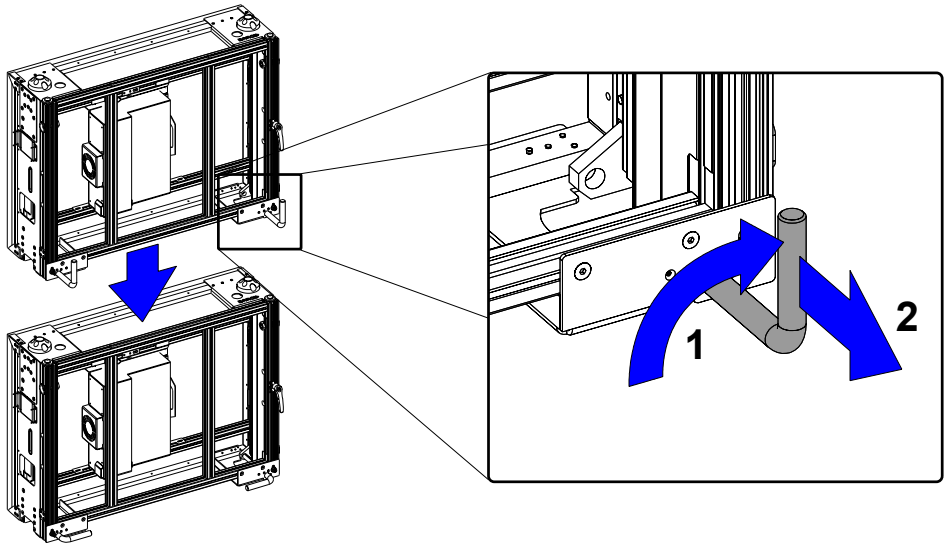


Image 7-13
Place the tile locking mechanisms in the unlocked position.

2. Place the OLite rental tile, with open locking mechanism, on top of another OLite rental tile.
3. Lock the two tiles together by pushing the handles of the upper tile inside and then turning the handles in their horizontal position. The left handle in clockwise direction and the right handle counterclockwise, seen from the rear of the rental tile.

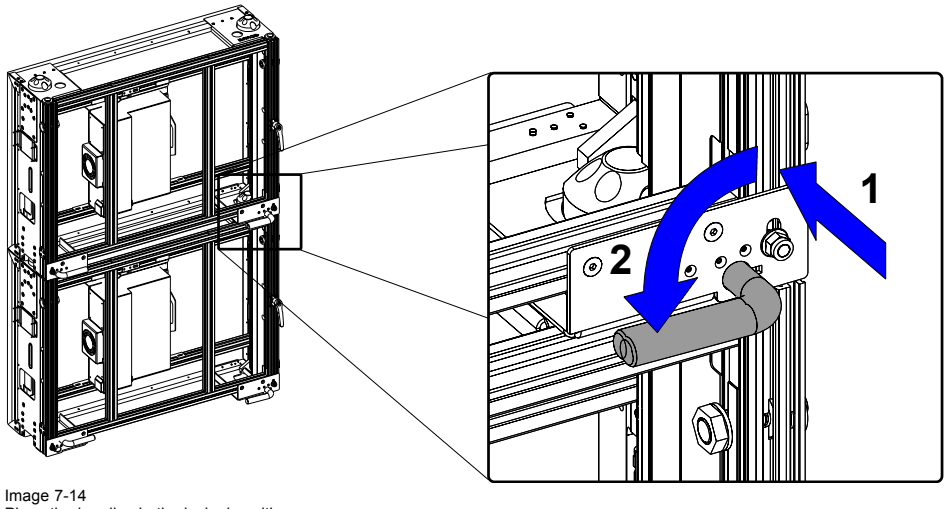


Image 7-14
Place the handles in the locked position.

7.8 Attach OLite rental tiles next to each other

How to attach OLite rental tiles next to each other ?

1. Place the side latch hook of the adjoining edge in open position by turning the small handle as far as possible clockwise.

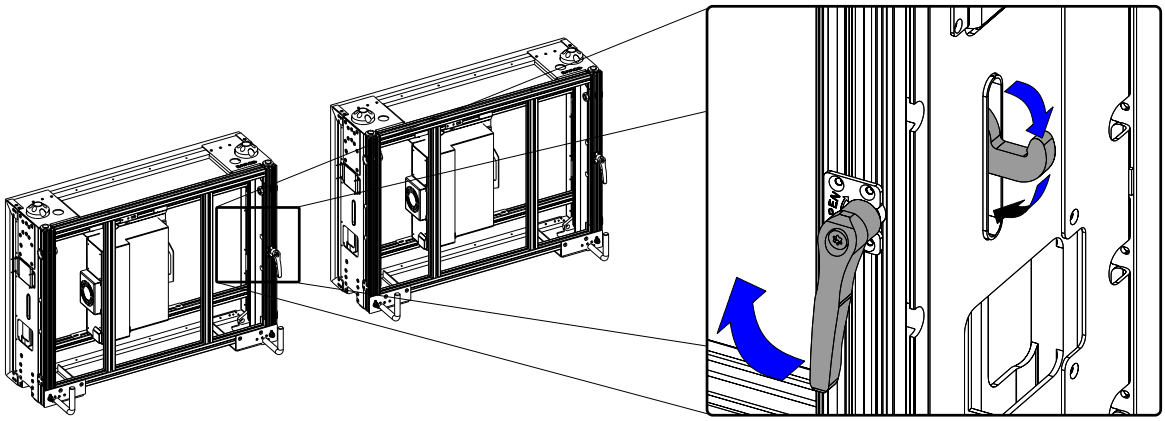


Image 7-15
Turn the small handle clockwise as far as possible.

2. Bring the two OLite tiles together and close the adjoining side latch hook by turning the small handle as for a possible counter-clockwise.

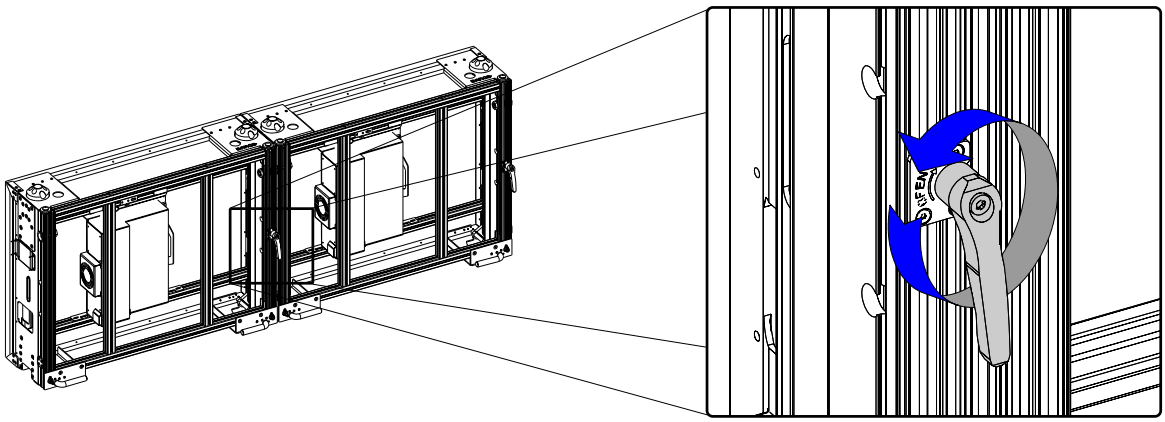


Image 7-16
Turn the small handle counterclockwise as far as possible to fasten the tiles together.

7.9 Install an OLite stacker system

OLite stacker

An OLite stacker is installed opposite every adjoining edge of two OLite rental columns and is required for OLite displays higher than two OLite tiles.

Necessary tools

19 mm wrench.

Necessary parts

Eight M12 bolts per stacker foot.

How to install an OLite stacker system ?

1. Attach the stacker foot rails to the stacker foot loosely, using eight bolts.
2. Slide the stacker foot with attached rails into the slots of the beams as illustrated.

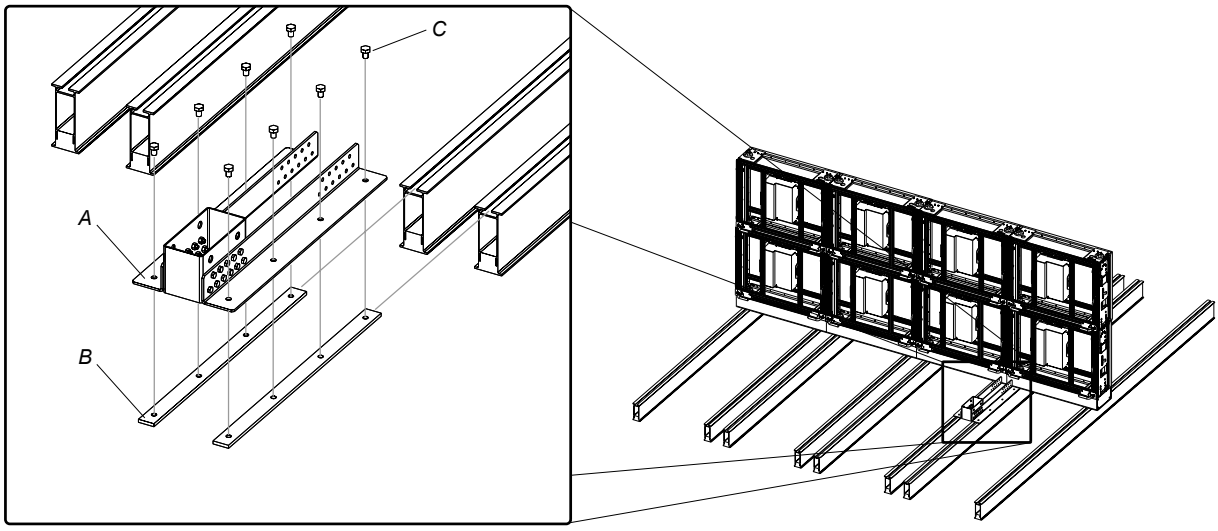


Image 7-17
Install stacker foot.

A Stacker foot.
B Stacker foot rail.
C M12 bolt.

3. Move the stacker foot forward up against the OLite rental foot and secure the eight bolts tightly.
4. Place the stacker bridge into position and secure the bridge with a lock key and two spring cotters.
   Note: *The small handle to operate the side locking mechanism has to stand in vertical position, otherwise the handle gets in the way to install the stacker bridge. Pull out the small handle and turn counterclockwise until the handle stands vertical.*

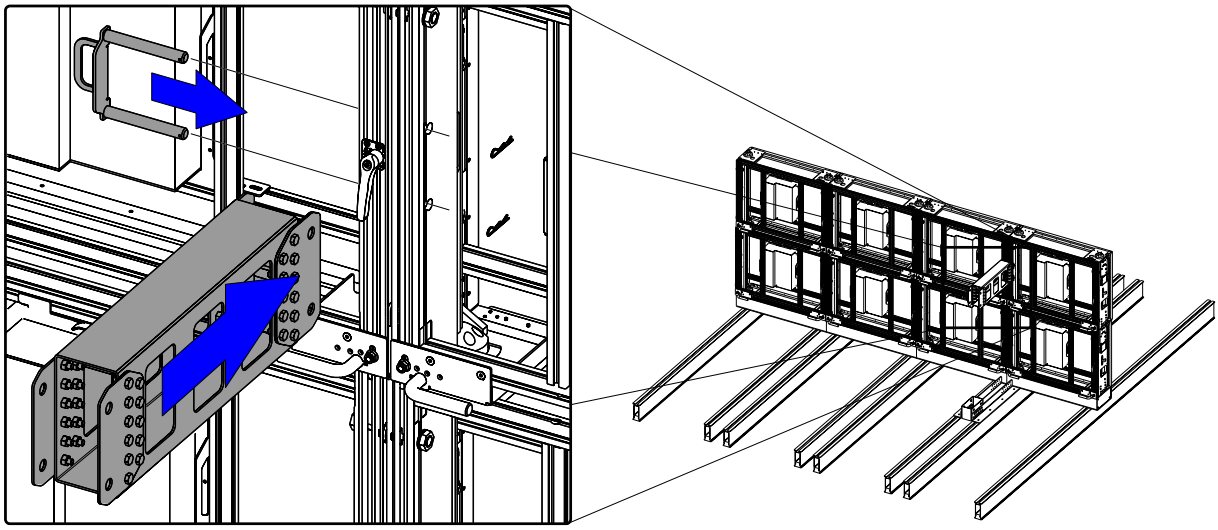


Image 7-18
Install stacker bridge.

5. Place the stacker profile vertically with the narrow end inside the stacker foot.

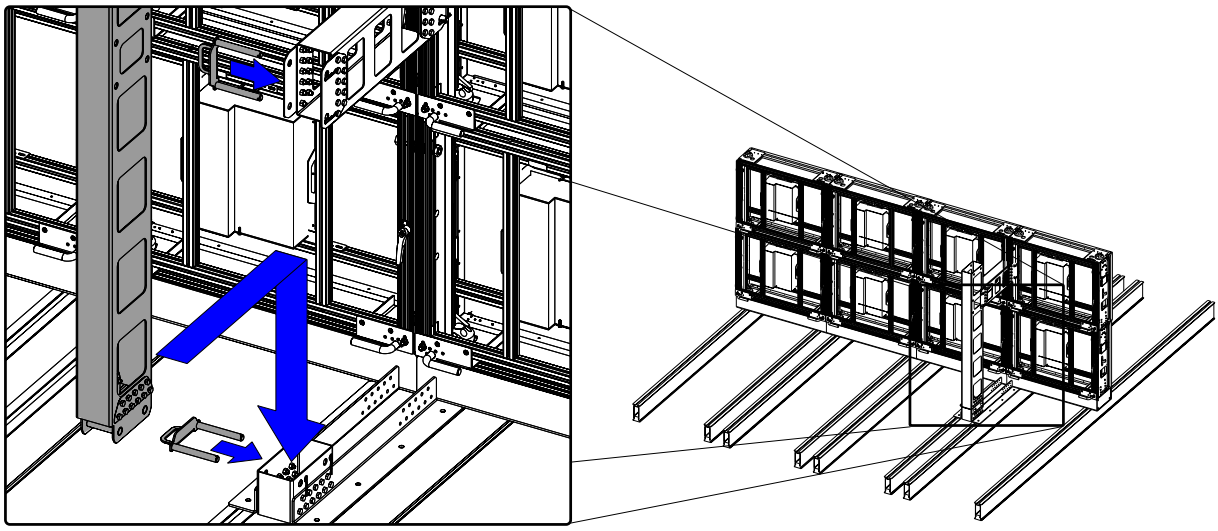


Image 7-19
Install stacker profile.

6. Secure the stacker profile with the foot and the bridge using two lock keys and four spring cotters.

WARNING: Ensure that each lock key is secured with two spring cotters.

7.10 Build up a floor mounted OLite rental display

Floor mounted OLite display

A floor mounted OLite rental display is built upon OLite rental feet. The OLite tiles are placed successively from left to right (or right to left) and row by row.

WARNING: The foot beams on which the OLite rental feet are mounted must be firmly attached to the ground with fixings, or ballast, or both as necessary before mounting the OLite tiles upon the rental feet. This to prevent possible tipping.

WARNING: An OLite rental display higher than 2 tiles requires a stacker system.

WARNING: The maximum height of a base stand OLite display is 12 tiles high.

Necessary tools

- Hoisting equipment.
- OLite single truss beam.

How to build up a floor mounted OLite rental display ?

1. Ensure you understand and follow all the safety guidelines, safety instructions and warnings mentioned in the chapter "Safety", page 3 of this manual.
2. Install the first row of OLite tiles successively from left to right (or right to left). Ensure each tile is attached and locked correctly with the others and with the OLite rental feet. See "Attach an OLite rental tile upon an OLite rental foot", page 45 and "Attach OLite rental tiles next to each other", page 47.
   Note: *The OLite rental tile final approach must be 45 degrees for flush fitting.*

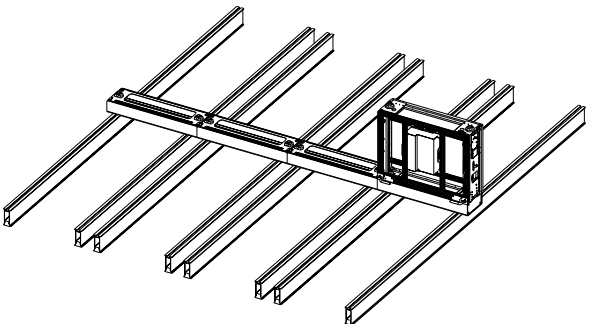


Image 7-20
Install first tile.

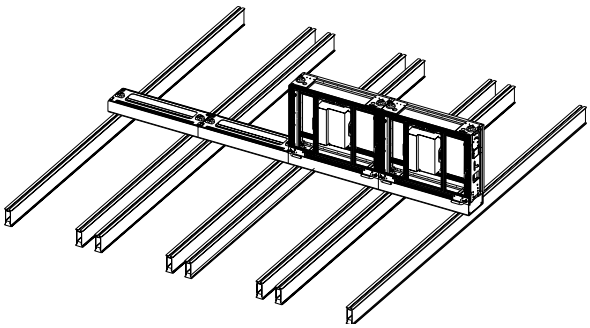


Image 7-21
Install second tile.

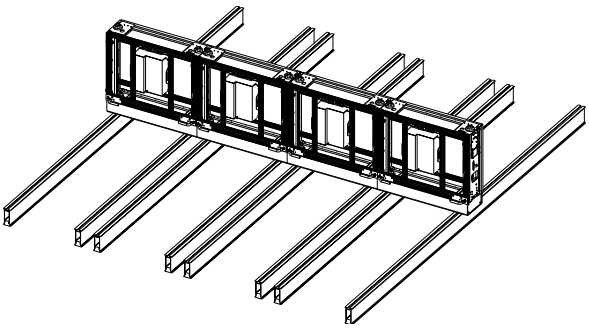


Image 7-22
Install first row of tiles.

3. Install the second row of OLite tiles. Ensure each tile is attached and locked correctly with the OLite tiles below and besides. See "Attach OLite rental tiles on top of each other", page 46 and "Attach OLite rental tiles next to each other", page 47.

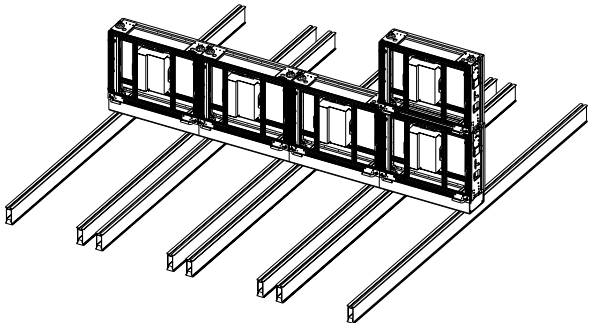


Image 7-23
Install first tile of the second row.

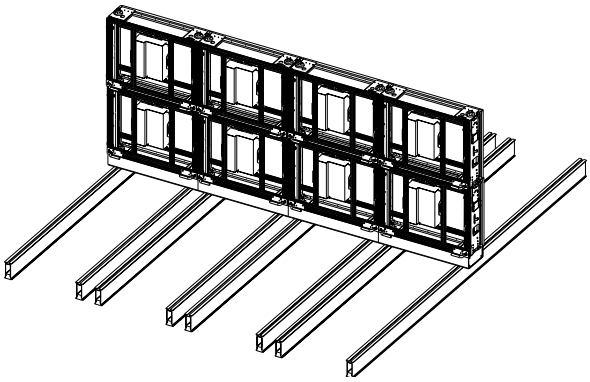


Image 7-24
Install second row of tiles.

4. Install an OLite stacker opposite each adjoining edge of two OLite rental columns. See procedure "Install an OLite stacker system", page 48 for correct and secure installation.

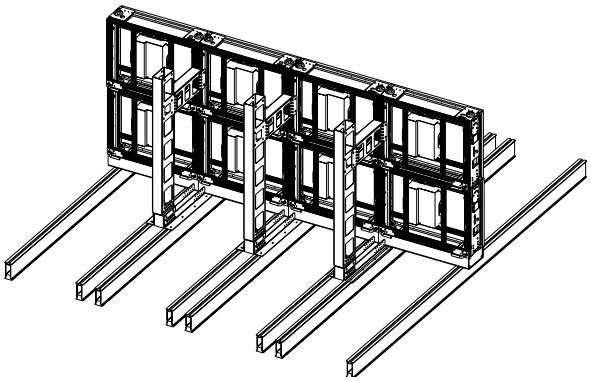


Image 7-25
Install stacker system.

5. Install the next two rows of OLite rental tiles. Ensure each tile is attached and locked correctly.

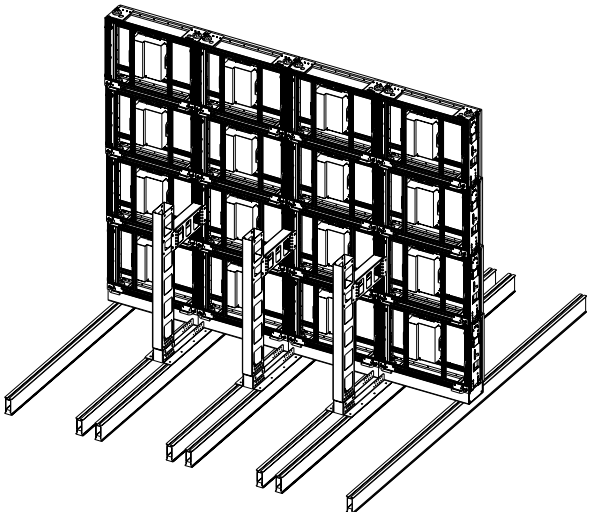


Image 7-26
Install the next two rows.

6. Install an OLite stacker upon the previously installed stacker.
   Note: *Only the vertical stacker profile and the stacker bridge have to be installed now. The lower vertical profile functions as stacker foot for the above vertical profile.*

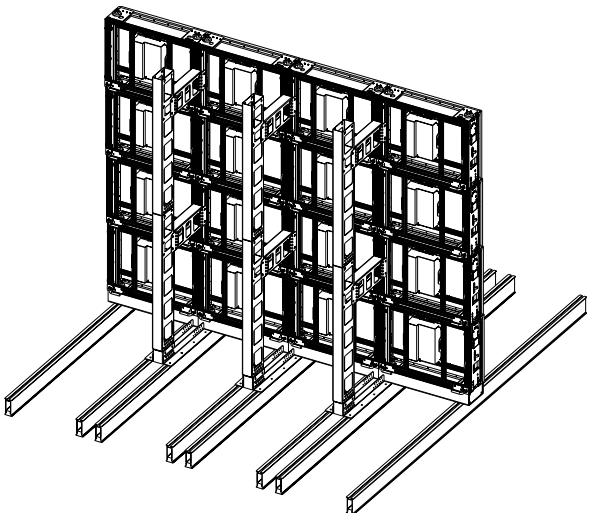


Image 7-27
Install stacker system.

7. Repeat step 5 and 6 until the OLite display is completed.

WARNING: The maximum height of a base stand OLite display is 12 tiles high.

7.11 Build up a hanging OLite rental display with truss beams

Hanging OLite rental display

A hanging OLite rental display is built up row by row. Each row is built by placing the OLite rental flight cases next to each other and fastening the OLite tiles side by side. The complete row is then lifted up directly out of the flight cases.

WARNING: Ensure that the truss installation is able to support the complete load of the OLite rental display before attaching OLite tiles.

WARNING: The maximum height of a hanging OLite rental display is 15 tiles high.

Necessary tools

- Hoisting equipment.
- OLite truss beams.

How to build up a hanging OLite rental display with truss beams ?

1. Ensure you understand and follow all the safety guidelines, safety instructions and warnings mentioned in the chapter "Safety", page 3 of this manual.
2. Place as much flight cases, without cover, next to each other as there will be OLite rental columns in the display.

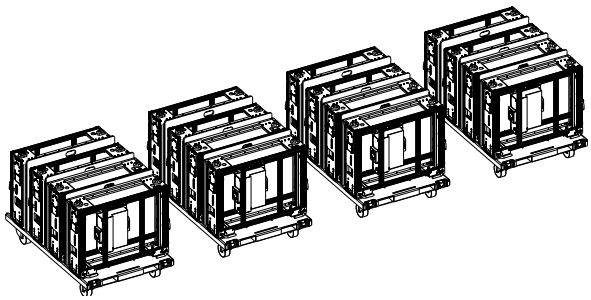


Image 7-28
Open one flight case per display column.

3. Construct one OLite row by fastening the outer OLite rental tiles inside the flight cases side by side with each other. See "Attach OLite rental tiles next to each other", page 47.

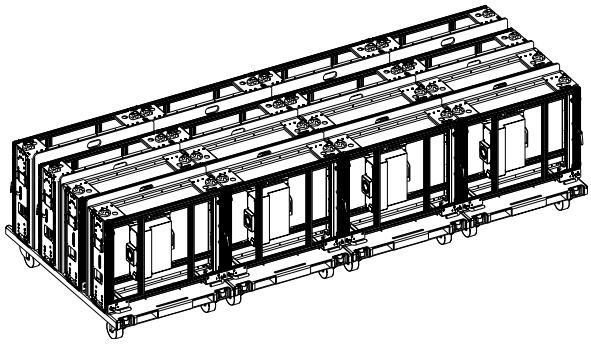


Image 7-29
Fasten the outer tiles together.

4. Unlock the OLite row from the flight cases. Turn the big handles upwards and then pull them out.
5. Place truss beams (single or dual) upon the complete unlocked OLite row. Make sure the truss beams are attached correctly with the OLite tiles. See "Attach an OLite truss beam upon an OLite rental tile", page 44.

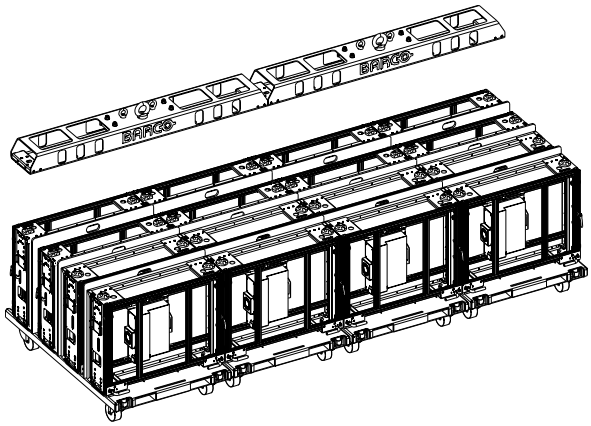


Image 7-30
Install truss beams upon the outer row of tiles.

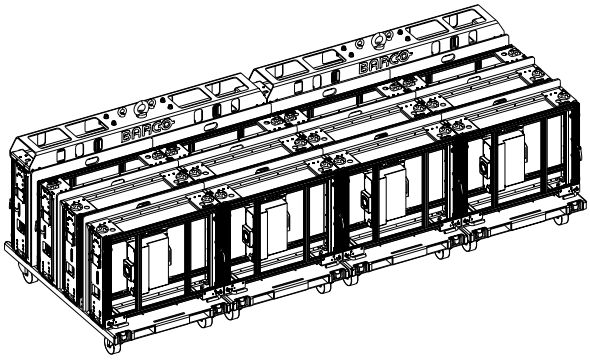


Image 7-31
Unlock the tiles from the flight case.

6. Lift up the complete OLite row out of the flight cases.

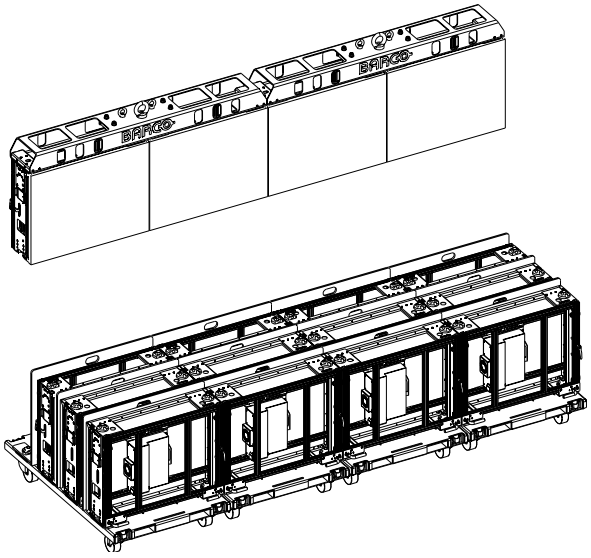


Image 7-32
Lift up the complete OLite row out of the flight cases.

7. Place the next unlocked row of OLite tiles just underneath the previously lifted row.
   Warning: *Hoist must take the complete load. Never put extra load on a flight case trolley. Keep approximately 2 mm between the undermost OLite tiles hanging on the hoist and the next row of OLite tiles standing in the flight cases underneath.*

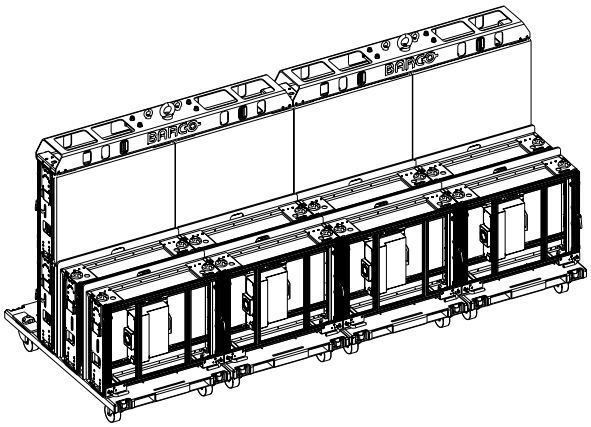


Image 7-33
Place the next unlocked row of OLite tiles just underneath.

8. Attach the next row of OLite tiles standing in the flight cases with the undermost OLite tiles hanging on the hoist. Do this by pushing the big handles inside the tile and then turning the handles in their horizontal position.
9. Lift up all OLite rows attached to the hoist.

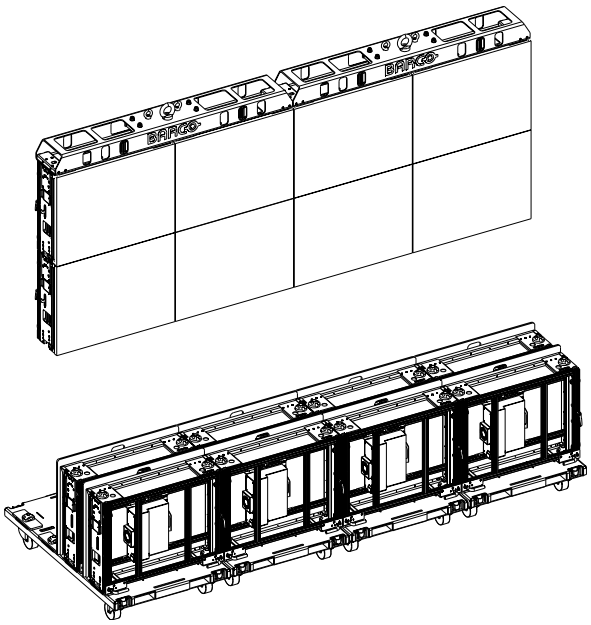


Image 7-34
Lift up row one and two.

10. Repeat from step 7 until the complete OLite display is constructed.

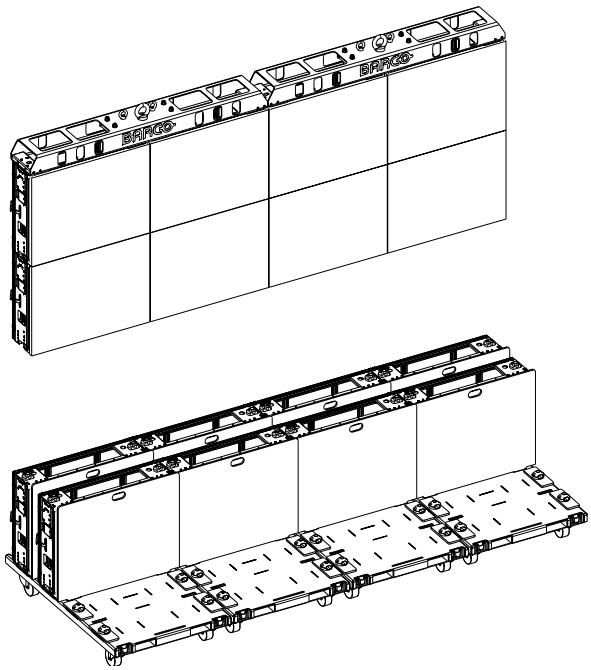


Image 7-35
Rotated the flight cases and construct a new row of tiles.

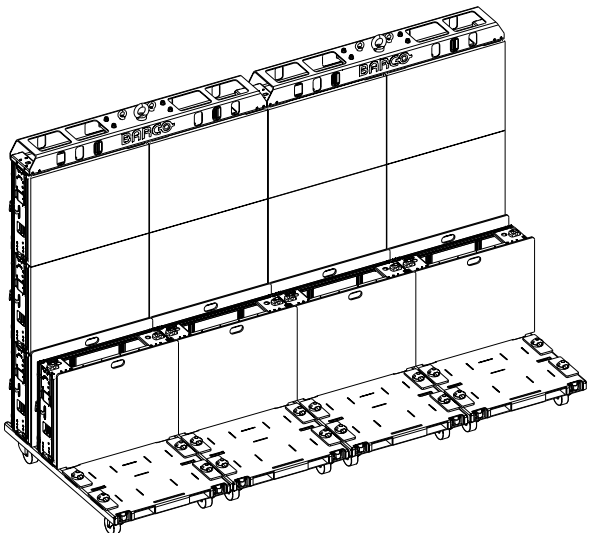


Image 7-36
Place the next row of tiles underneath the suspended rows.

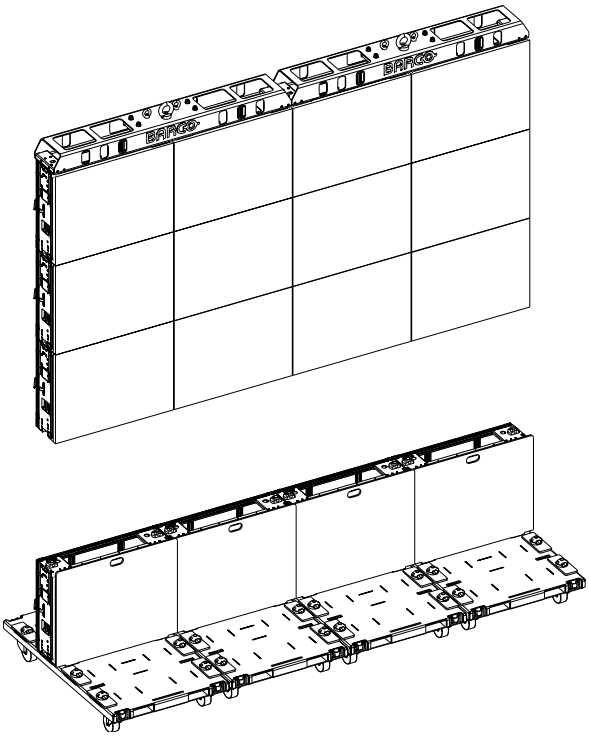


Image 7-37
Attach and lift up the next row of tiles.

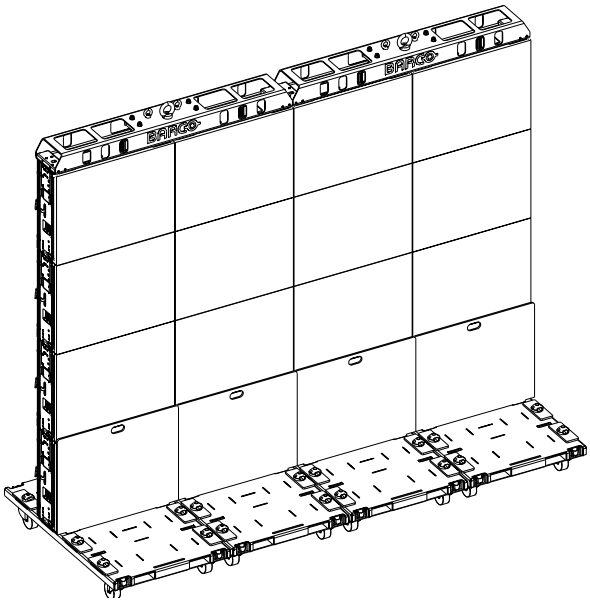


Image 7-38
Place the next row of tiles underneath the suspended rows.

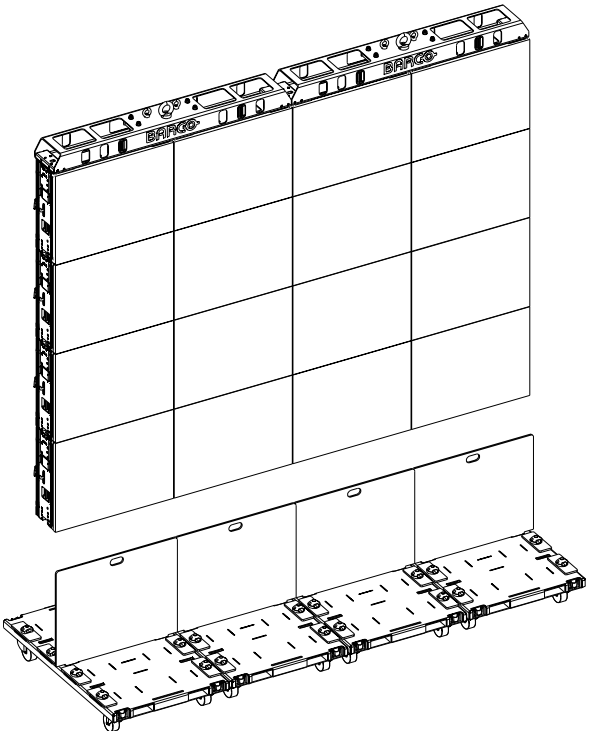


Image 7-39
Attach and lift up the next row of tiles.

WARNING: The maximum height of a hanging OLite rental display is 15 tiles high.

7.12 Secure a hanging OLite rental display

Necessary parts

Safety steel cables or chains.

How to secure a hanging OLite rental display ?

1. Lift up the OLite display to the desired height.
2. Place a safety steel cable or chain around the truss installation above the OLite display and through the safety eyebolt on the truss beam. Use one safety steel cable or chain per safety eyebolt.
   Warning: *The angle between the rental truss beam and the safety steel cable or chain must be at least 45º.*

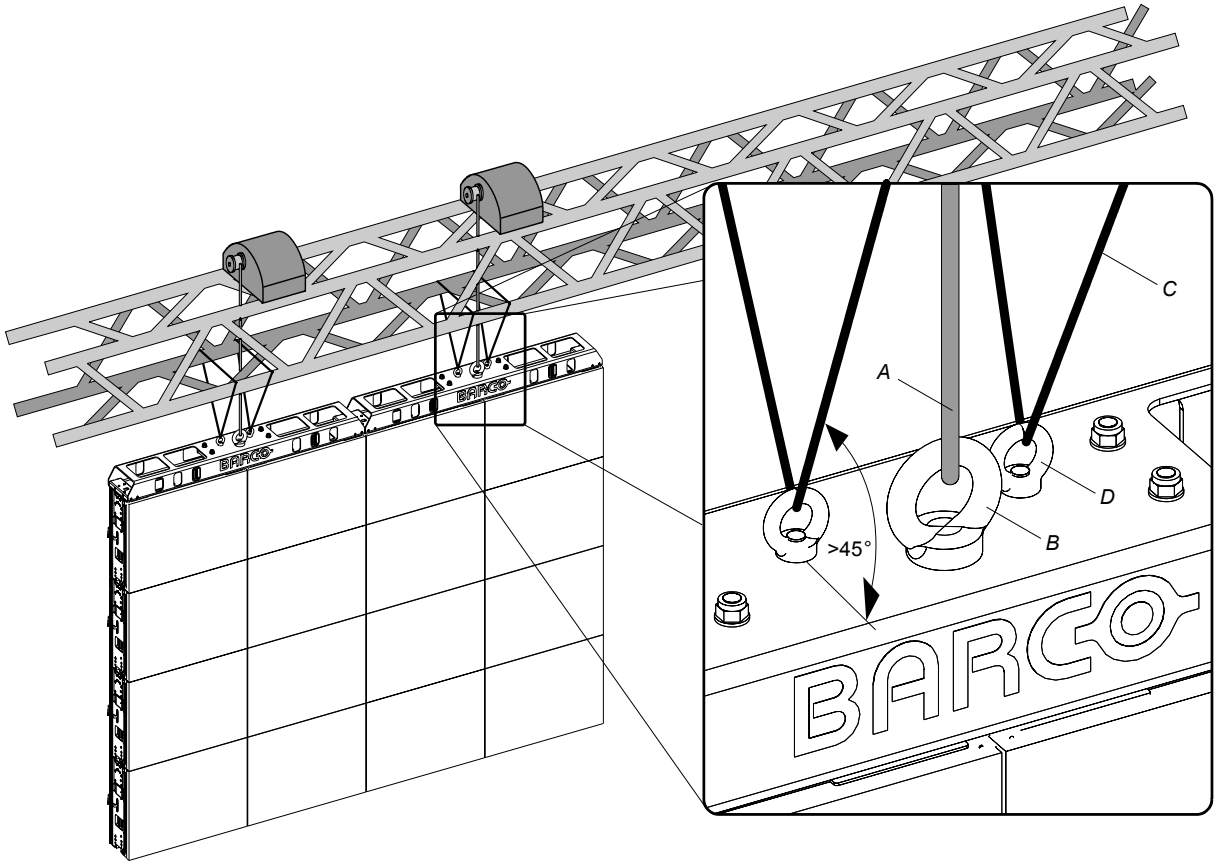


Image 7-40
Secure a hanging OLite rental display.

A Hoist steal cable or steel chain.
B Hoist eye bolt.
C Safety steal cable or safety steel chain.
D Safety eye bolt.

8. CABLING OF AN OLITE RENTAL DISPLAY

Outdoor plugs and sockets for OLite rental tiles

Barco uses custom designed outdoor sockets for power and data connections from tile to tile and to other peripherals. These rugged sockets are watertight (IP65) when used with the appropriate plugs and sealing rings. Each socket is equipped with a plug holder clamp which, when locked, ensures the plug is completely pressed into the socket.

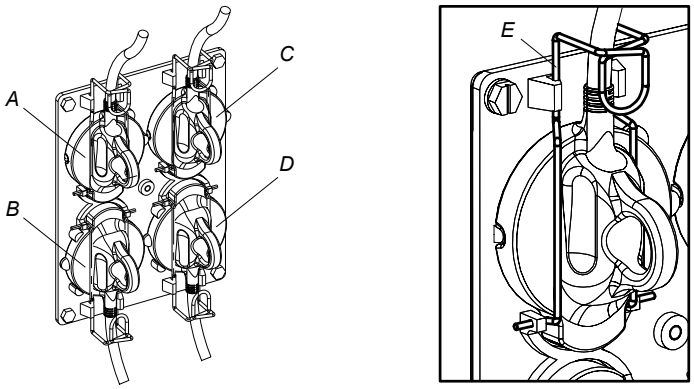


Image 8-1

A Power output port.
B Power input port.
C Data output port.
D Data input port.
E Plug holder clamp.

WARNING: The outdoor input and output sockets for OLite tiles can only be used in conjunction with Barco's outdoor cables for LED-walls. Do not use any other cables than those specified.

WARNING: Dummy plugs must be placed on unused outdoor input and output sockets of OLite tiles and all plug holder clamps must be locked firmly.

WARNING: Make sure that the connector sockets are provided with sealing rings before plugging in the power and data cables. Use the correct sealing ring for the corresponding socket. Black colored ring (B361243, left image) for power, red (B361595, right image) for data. Replace damaged sealing rings immediately.

Overview

- Power cabling of an OLite rental display
- Data cabling of an OLite rental display
- Module interconnection of an OLite 510 rental frame
- Module interconnection of an OLite 612 rental frame
- Realize the cabling between OLite module and OLite controller box

8.1 Power cabling of an OLite rental display

Power boxes

Barco provides several types of power boxes. Depending on the size of the OLite rental display you can choose to use the mono phase power box, custom made power box or rental power box. The type of power box, does not influence the power cabling of the OLite rental display. See installation manual of the concerned power box for installation instructions.

WARNING: Risk of electric shock / Risk of fire: To protect against risk of fire caused by overloading of power cables, MAXIMUM 2 may be connected in parallel. Each power source cable supplying maximum 2 should be protected by a circuit breaker or fuses rated 16 A / 250 VAC (15 A / 250 VAC in the USA and Canada). Note that one OLite tile requires 200-240 VAC, 50-60 Hz, 4.22 amps at 230 VAC.

Necessary parts

- Power box(es) with matching cables.
- Power linking cables.
- Dummy power plugs

How to realize the power cabling of an OLite rental display ?

1. Install the power box nearby the OLite rental display. Ensure the power box provides as much power circuits as required to energize the display in a safe manner. If necessary, install several power boxes. See manual of the used power box for installation instructions.
2. Connect a power source cable coming from the power box with the lower tile in a column of two high.
   Note: *Depending on the type of used power box, a multi power cable in combination with a spider connector is inserted between the power box and the power source cable leading to the OLite tile. See manual of the used power box to realize the cabling between power box and OLite display.*
3. Place a power linking cable between the tile, receiving power directly from the power box via a power source cable, and the tile above.
4. Place a dummy power plug on the power output socket of the upper tile in the power branch.
5. Make sure that all plug holder clamps are locked firmly.
6. Repeat from step 2 until all OLite rental tiles are provided with power.

Example of power cabling

The example below shows the power cabling of a two by two OLite rental display. The rental power box (A) is connected via a multi power cable (B) with a spider connector (C). Each spider output cable leads to a column of two OLite tiles. The power connection in this column is realized with a power linking cable (D). Note that the unused power output socket is sealed with a dummy power plug (E).

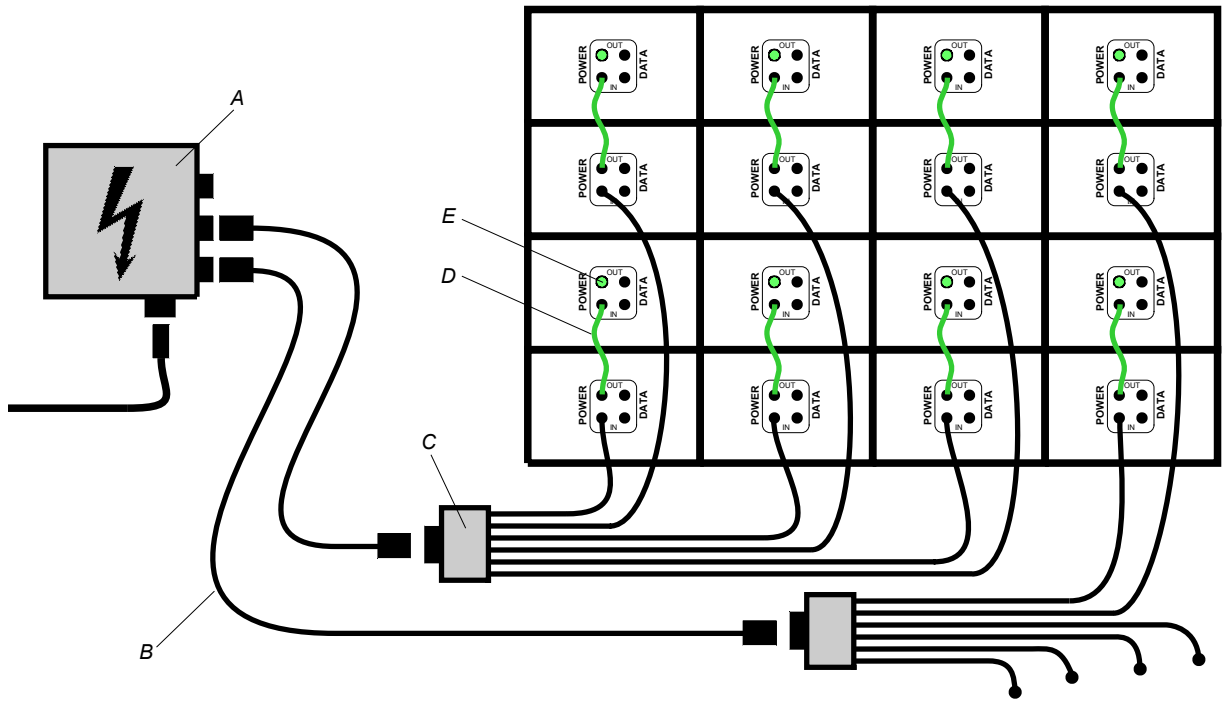


Image 8-2

8.2 Data cabling of an OLite rental display

Necessary parts

- Data linking cables.
- One dummy data plug.

How to realize the data cabling of an OLite rental display ?

1. Connect the data cable coming from the digitizer with the data input socket of the first tile. The first tile must be one of the tiles in the corner of the OLite display.
   Note: *The maximum cable length between the digitizer and the first tile may not exceed 5 meter.*
2. Daisy chain the data-linking cables from the data output of previous tile to the data input of the next. This daisy chain linking can be realized either in horizontal (recommended) or vertical direction starting in a corner of the OLite display.
3. Place a dummy data plug on the data output socket of the last tile in the chain.
4. Make sure that all plug holder clamps are locked firmly.
5. Specify in the setup controlling software how the data path is realized (horizontal or vertical) and which tile is the first in the chain.

When using a fiberlink system the fiberlink data connection is inserted between the digitizer and the first OLite tile. The fiberlink receiver is also equipped with Barco's outdoor connector sockets.

When using an Ambient Environment Controller (AEC) the data connection of the AEC is inserted between two OLite tiles. The AEC is also equipped with Barco's outdoor connector sockets.

Example of data cabling of an OLite display

The example below shows the data cabling, seen from the rear of an OLite display of four tiles wide and four tiles high. The data path is realized in a horizontal direction and starts in the lower left corner (seen from the rear). Note that an AEC is included in the data path. The settings in the control software refer to the display seen from the front. So, the first tile in the data path has to be indicated as the lower right tile of the display.

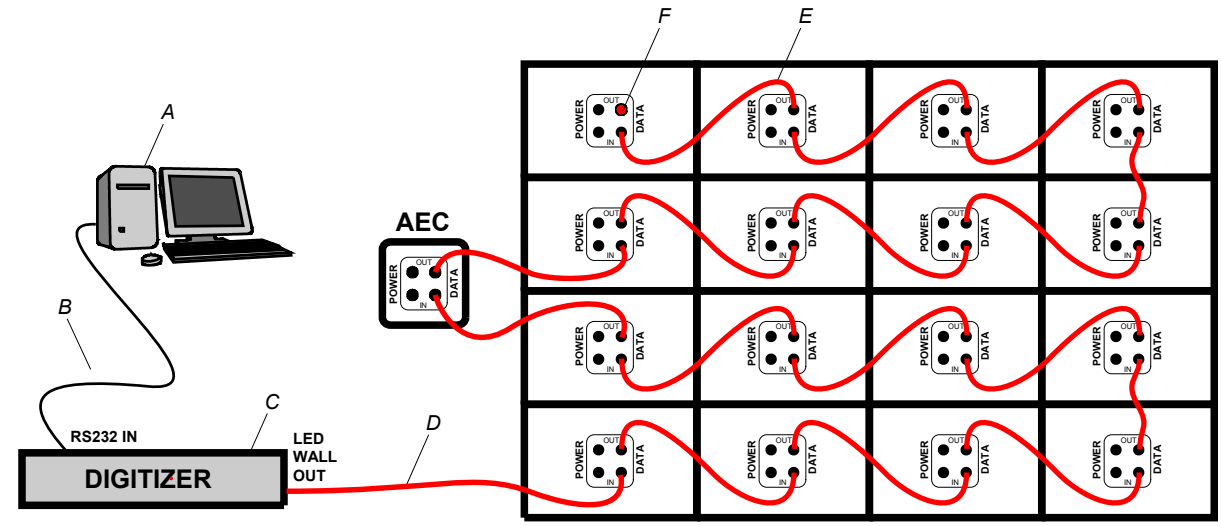


Image 8-3

A Local PC with control software.
B RS232 connection cable between PC and digitizer (maximum 15 meter).
C Digitizer.
D Data cable between digitizer and first tile (maximum 5 meter).
E Data linking cable between tiles.
F Dummy data plug.

8.3 Module interconnection of an OLite 510 rental frame

Interconnection diagram

The OLite 510 rental frame contains eight columns of eight OLite 510 modules. These columns are grouped per two and ordered from right to left, seen from the rear of the tile. A cable string is used to connect all 16 OLite 510 modules of one group with the OLite control box, see illustration below.

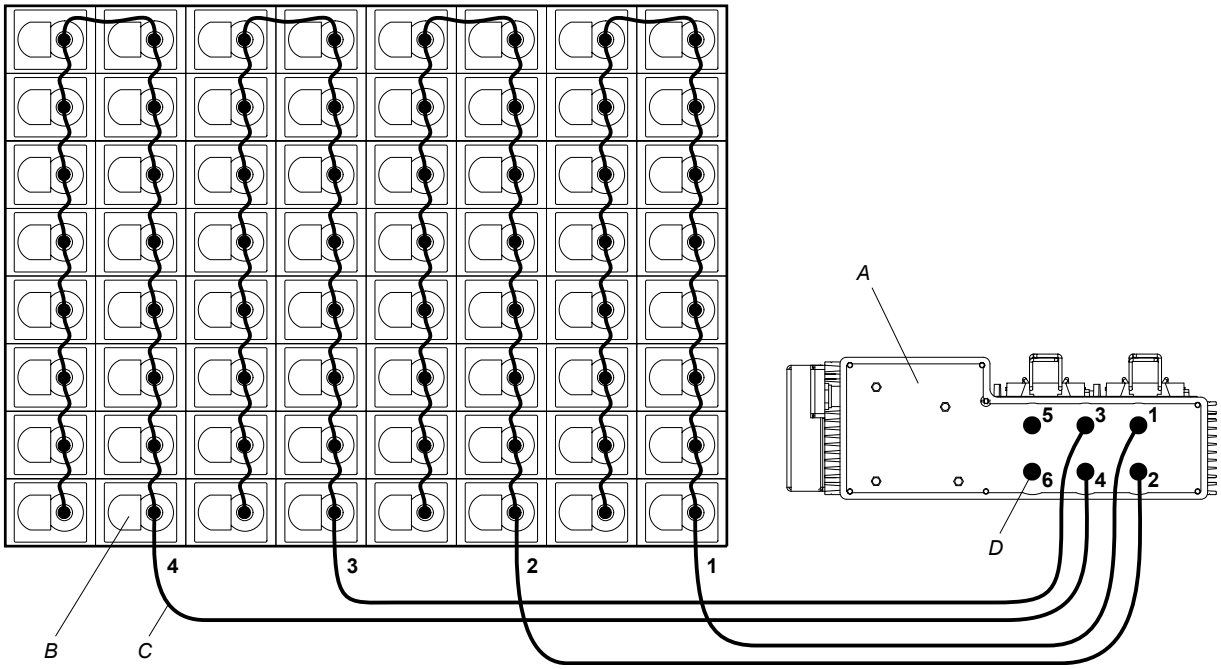


Image 8-4

A Bottom view of OLite control box.
B Rear view of an OLite 510 module.
C OLite 510 cable string.
D Cover for unused output ports of the OLite control box.

8.4 Module interconnection of an OLite 612 rental frame

Interconnection diagram

The OLite 612 rental frame contains eight columns of six OLite 612 modules. These columns are grouped per two and ordered from right to left, seen from the rear of the tile. A cable string is used to connect all 12 OLite 612 modules of one group with the OLite control box, see illustration below.

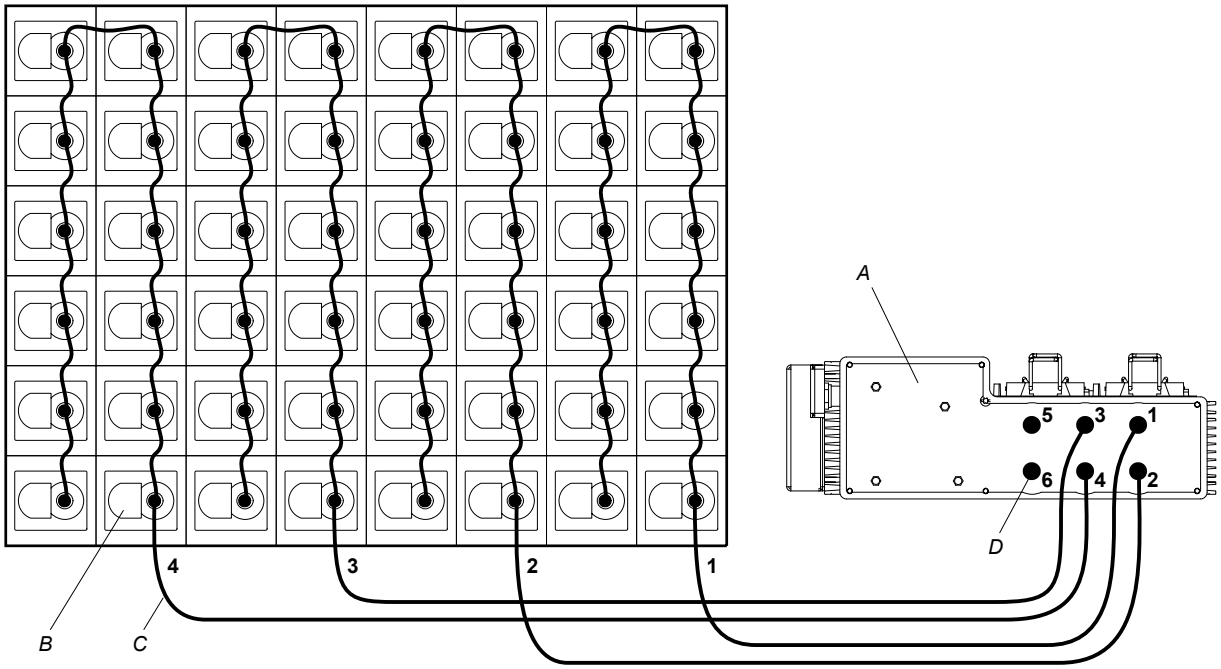


Image 8-5

A Bottom view of OLite control box.
B Rear view of an OLite 612 module.
C OLite 612 cable string.
D Cover for unused output ports of the OLite control box.

8.5 Realize the cabling between OLite module and OLite controller box

Necessary parts

- Four OLite cable strings per rental tile.
- Two covers for unused output ports of the OLite control box.

How to realize the cabling between OLite module and OLite controller box ?

1. Ensure that all OLite modules are well attached into the grid of the OLite rental frame.
2. Remove the OLite control box.
3. Connect the four OLite cable strings with the OLite modules as illustrated in the chapters "Module interconnection of an OLite 510 rental frame", page 62 and "Module interconnection of an OLite 612 rental frame", page 63. Realize the connection between OLite module and cable string as follows:
   a) insert the plug into the socket of the OLite module. Keep the plug cable entrance vertically oriented while approaching the socket of the OLite module as illustrated.
   b) push the plug completely into the socket.
   c) fasten the plug by turning the locking cap of the plug clockwise as far as possible.

   Caution: *Be careful while connecting the cable string to the OLite module to prevent damage of the socket pins.*

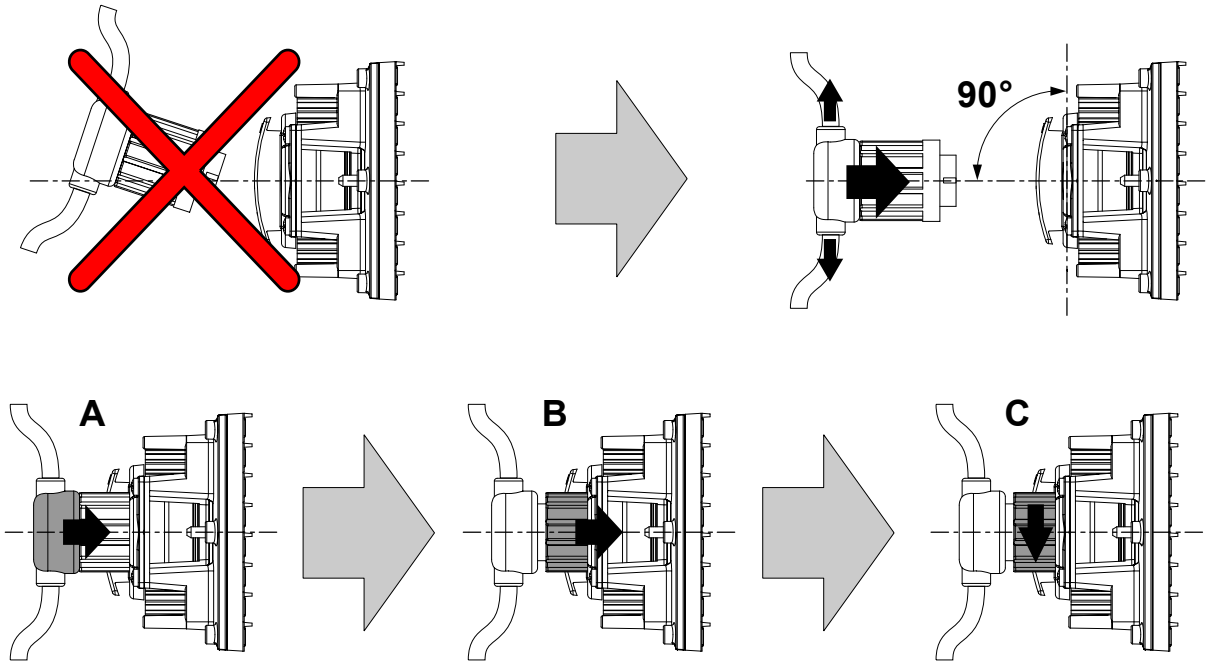


Image 8-6

Warning: *Ensure that the locking cap of each plug is turned clockwise as far as possible until you feel a “click”.*

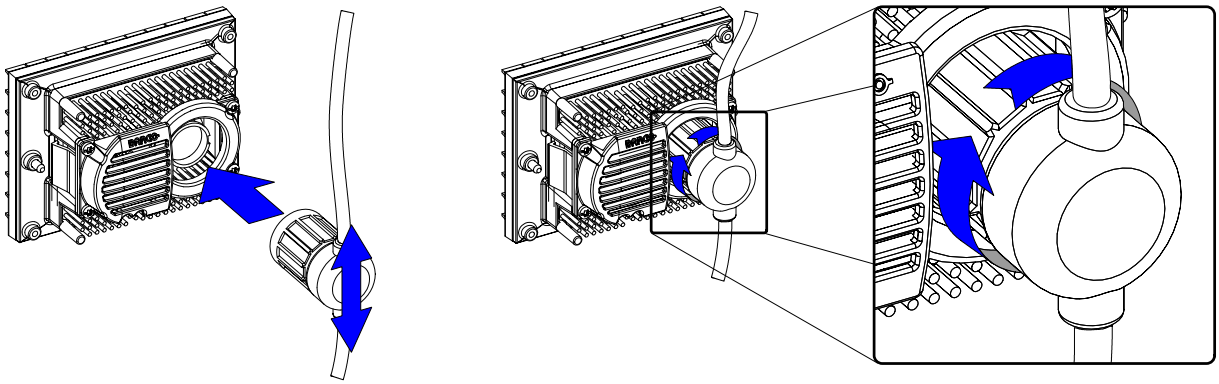


Image 8-7

4. Place the OLite control box back in the tile.
5. Connect the four cable strings with the OLite controller output ports as illustrated in the chapters "Module interconnection of an OLite 510 rental frame", page 62 and "Module interconnection of an OLite 612 rental frame", page 63.

6. Place a cover on the unused output ports 5 and 6 of the OLite control box.
   Warning: *To meet the demands of the IP65 protection norm a cover must be placed on every unused output port of the OLite control box.*

   Note: *Normally the OLite control box is delivered with a cover on the output ports 5 and 6.*

Image 8-8
Cover for unused output ports of the OLite control box (20 pieces: **R9853031**)

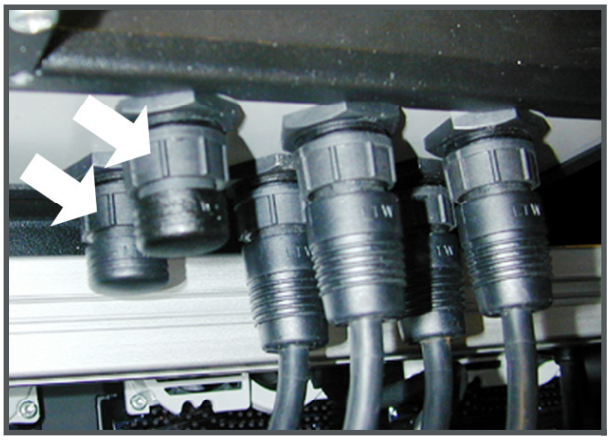


Image 8-9
Cover placed on the unused output ports 5 and 6 of the OLite control box.

WARNING: ALWAYS disconnect the power cord from the OLite control box before connecting or disconnecting the module cable string or one of the OLite modules.

9. OLITE CREATIVITY PACK

Introduction

The OLite modules, used in the OLite rental tile, can be used in a different arrangement than the standard set up of 64 OLite 510 or 48 OLite 612 modules per tile. You can place the OLite modules in a creative way to integrate the modules in the set design for concert touring, television shows, spectaculars, etc. Or you can use the OLite modules as architectural elements, both indoor and outdoor. To facilitate the creative set up of the OLite modules, Barco offers a set of additional hardware and software to expand the usage of OLite modules beyond normal screen applications.

The same control box of the OLite rental tile is used but differently configured. Via the Director toolset (control software), the control box is set in “Customized mode” instead of “Tile mode”. This mode activates all output ports of the control box and allows you to configure the OLite display in a creative way. See user guide of the Director toolset for more information about the software configuration of the OLite modules in a customized set up.

Due to power limitations of the cables, used between the OLite modules, the number of modules and the length of the total cable string is bound to some set up rules described in the following chapters. Despite those rules, the possibilities of the system reach very far.

To enlarge the creative possibilities of the system, boosting of the OLite 510 modules is disabled in case the configuration of the control box is set to “Customized mode”. Note that only the OLite 510 modules have boost mode.

Overview

- Available packages
- OLite support grid
- Possibilities
- OLite creativity example

9.1 Available packages

Available packages

Art. No.	Description	Quantity	Image
R9853100	Cable string for four OLite modules. • Bridging distance of 40 cm (center to center) between modules. • Lead in and lead out cable of 25 cm provided with 12 pins link connector. • One cover (end cap 12 pins connector) included.	8 pieces	image 9-1
R9853111	Extension cable of 1 meter. Used between controller and first cable string or between two cable strings.	10 pieces	image 9-2
R9853115	Extension cable of 5 meters. Used between controller and first cable string or between two cable strings.	10 pieces	image 9-3
R9853031	Cover (end cap 12 pins connector). Used to seal the last lead out (12 pins) of a complete cable string or to seal the unused output ports of the control box.	20 pieces	image 9-4
R98530805	Module dummy (23 pins). Used to seal a 23 pins module connector of the cable string.	5 pieces	image 9-5
R98530820	Module dummy (23 pins). Used to seal a 23 pins module connector of the cable string.	20 pieces	image 9-5

Image 9-1
Cable string for four OLite modules (**R9853100**).

Image 9-2
Extension cable of 1 meter (**R9853111**).

Image 9-3
Extension cable of 5 meters (**R9853115**).

Image 9-4
Cover for 12 pins connector (**R9853031**).

Image 9-5
Module dummy 23 pins (5 pieces **R98530805**).

9.2 OLite support grid

Design guidelines

It's obvious that the design of the support grid for the OLite modules must comply with several requirements regarding dimensions, strength, accessibility, etc. The housing of the OLite modules is provided with snap-fits for fast and easy attachment to a support grid (frame). It's important to use the correct cutting dimensions in the design of the support grid for optimal attachment of the modules with the support grid. For more information or help about OLite support grids, contact Barco NV.

- Respect the cutting dimensions used for the snap fit feature of the OLite module.
- It's recommended that the grid spacing is a multiple of the OLite pixel pitch. This is important to get a good impression of the video content displayed.
- The plate thickness of the frame must be 3 mm.
- Provide the support grid with the necessary attachment points.
- It's recommended to brush the support grid with grain 120 to smooth away all burrs. This will facilitate the snap in of the module.

OLite 510 cutting dimensions

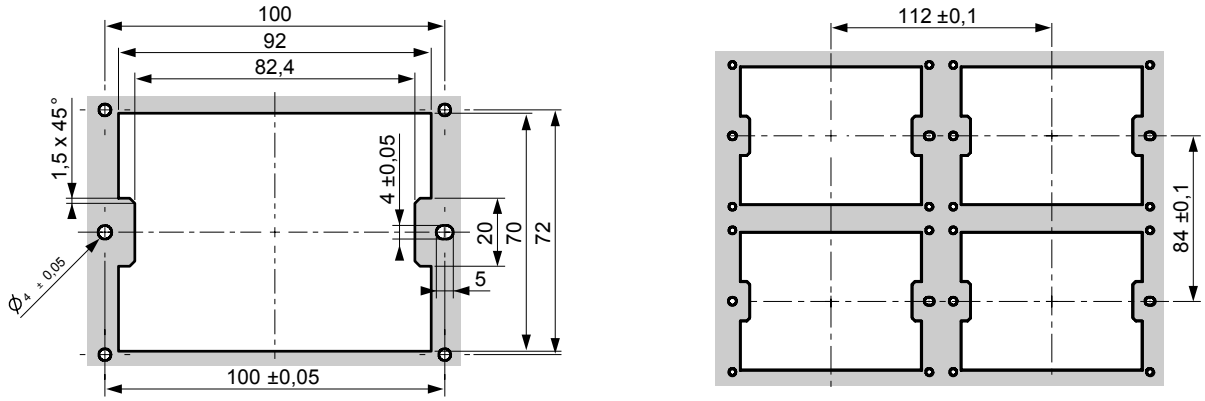


Image 9-6
Dimensions given in millimeters.

OLite 612 cutting dimensions

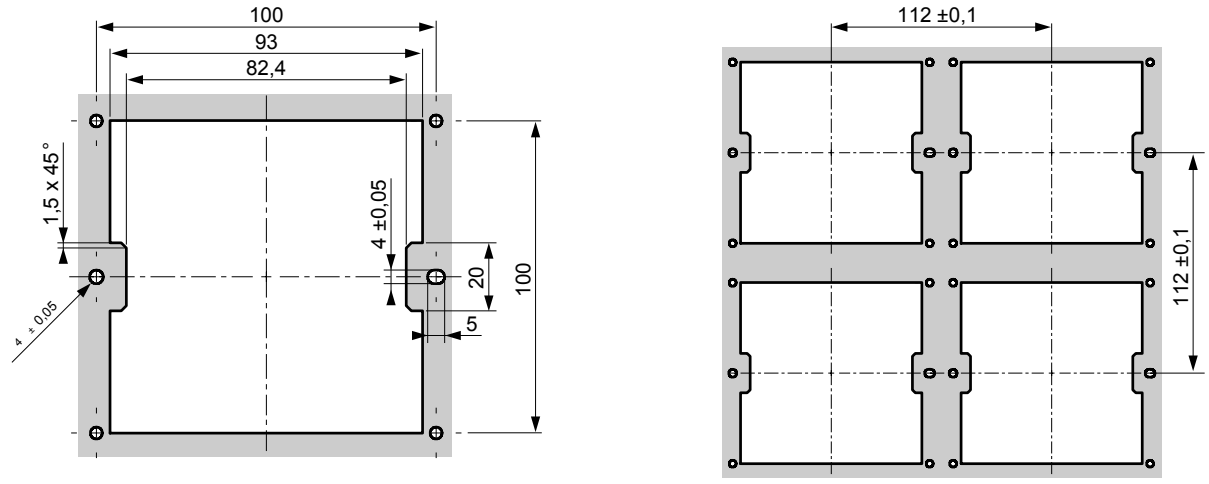


Image 9-7
Dimensions given in millimeters.

9.3 Possibilities

Control box possibilities

- All six (6) output ports of the control box are activated.
- Up to 16 OLite 510 modules per output port.
- Up to 64 OLite 510 modules per control box (due to power limitations).
- Up to 12 OLite 612 modules per output port.
- Up to 48 OLite 612 modules per control box (due to power limitations).

CAUTION: The digitizer can only drive one type of OLite modules at the same time. So, use either all OLite 510 or all OLite 612 modules on the same digitizer.

WARNING: ALWAYS disconnect the power cord from the OLite control box before connecting or disconnecting the module cable string or one of the OLite modules.

The following OLite possibilities are illustrated with OLite 510 modules. Nevertheless, the same possibilities are valid for the OLite 612 modules as well, but with the limitation of maximum 12 OLite 612 modules per output port and maximum 48 OLite 612 modules per control box.

Module angle possibilities

- The OLite modules can be placed either horizontally (0° or 180°) or vertically (90° or 270°). However for outdoor use it's recommended to install the modules horizontally with the shaders up (0°). Angle placement is not allowed.

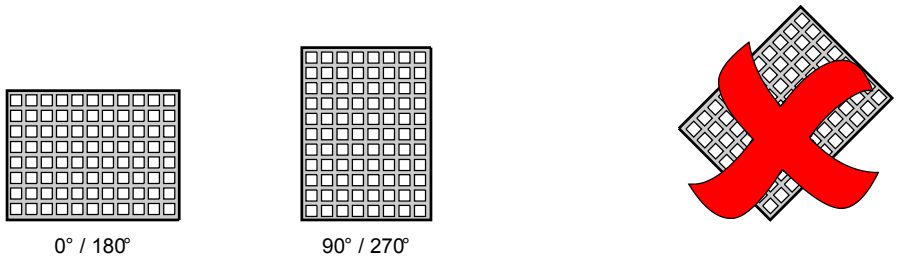


Image 9-8

Module to module cable string possibilities

- The cable string (A) has four plugs to connect a module (B) to. The maximum module spacing between two neighboring plugs is 40 centimeter (center to center), either horizontally or vertically.

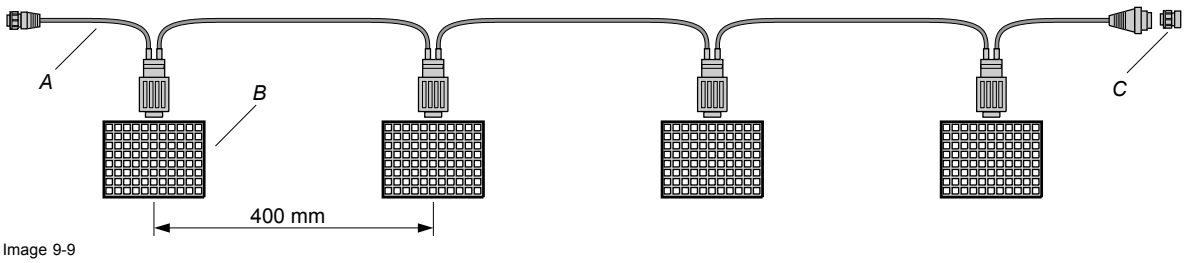


Image 9-9

- The module spacing of the cable string can be increased by using module dummy plugs (D). Per dummy plug the spacing is increased with 40 centimeter, see example below.

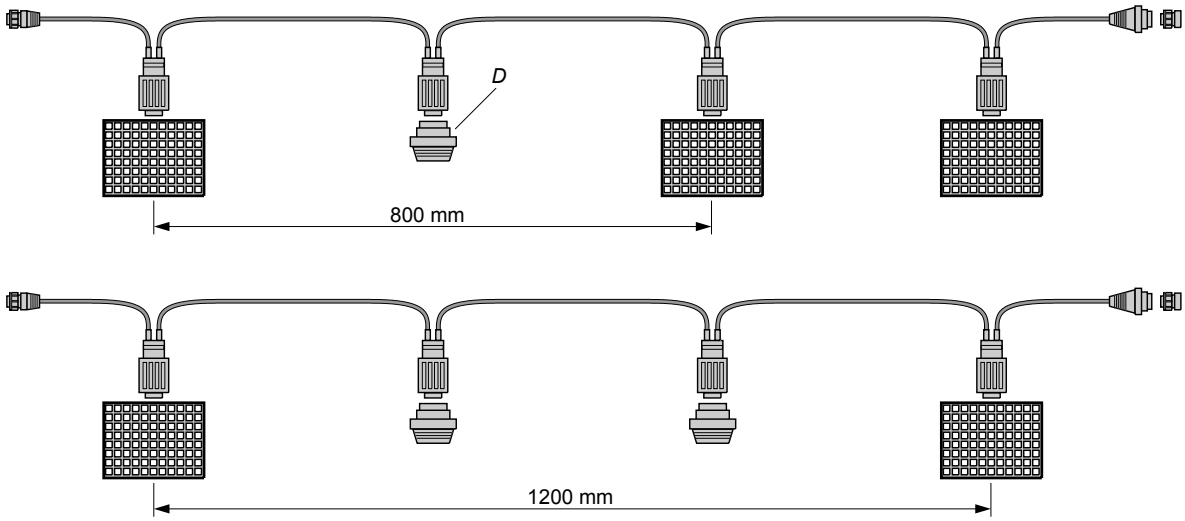


Image 9-10

- Maximum 3 module dummy plugs (A) can be connected in series between two modules. Use an extension cable to bridge longer distances to the next OLite module. Note that a dummy module plug does not count as a module. So, as general rule, per dummy plug used, you lose half a meter of the maximum allowed length of extension cable.

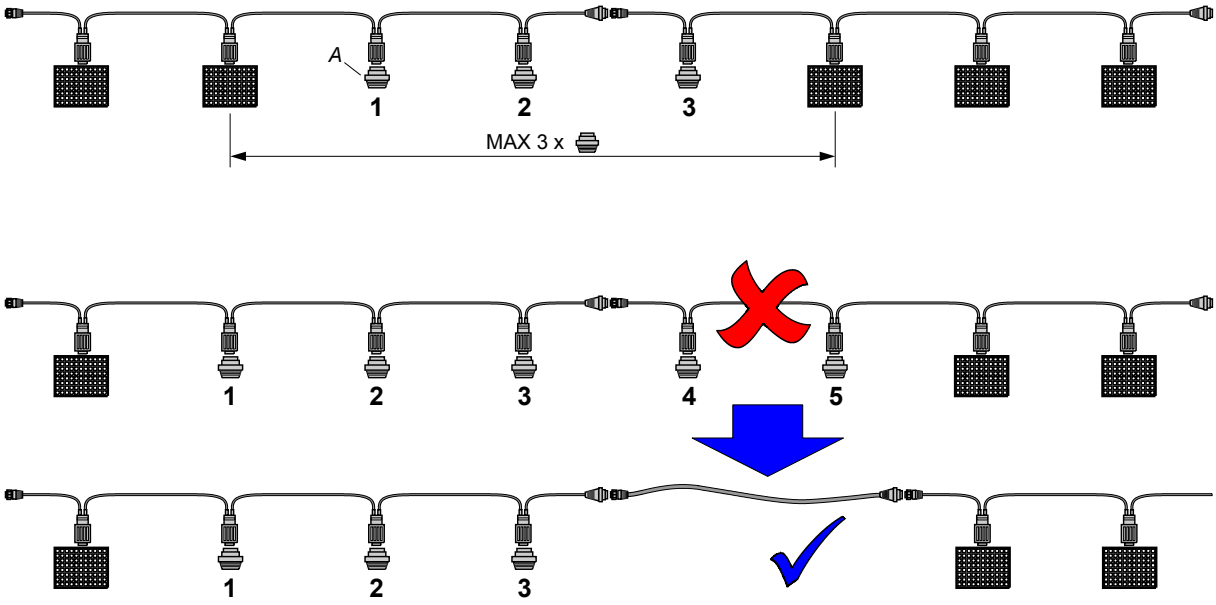


Image 9-11

Extension cables possibilities

- Extension cables can be combined to make up intermediate lengths. However, always use a minimum of extension cables to bridge the distance between output port and module or between two modules. So, use a 5 meter extension cable instead of 5 times a 1 meter extension cable, see illustration below.

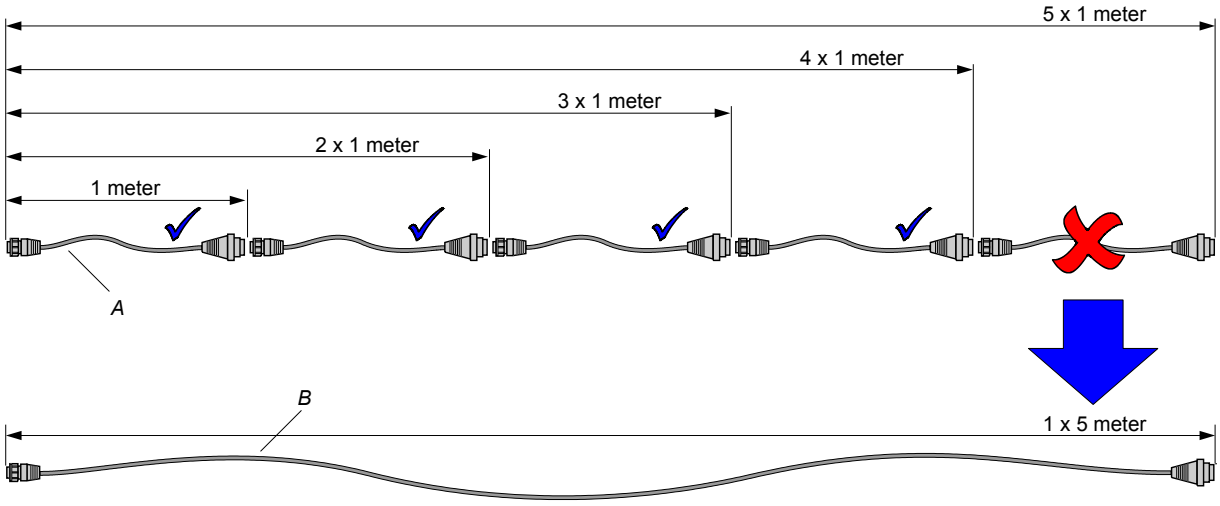


Image 9-12

Module cabling possibilities

- Up to 5 meter extension cable (B) between the output port of the control box (A) and module (C). Note that a dummy module plug does not count as a module. So, per dummy plug used, you lose half a meter of extension cable.

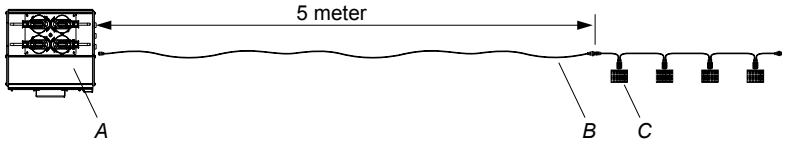


Image 9-13

- Up to 5 meter extension cable (B) between modules (A). Note that a dummy module plug does not count as a module. As a general rule, per dummy plug used, you lose half a meter of extension cable.

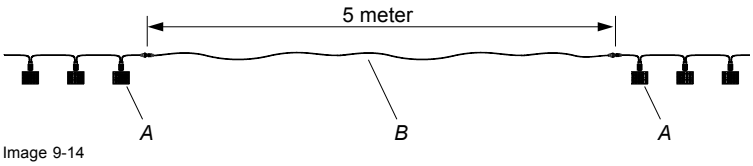


Image 9-14

- Up to 18 meter total cable string between control box and last module.

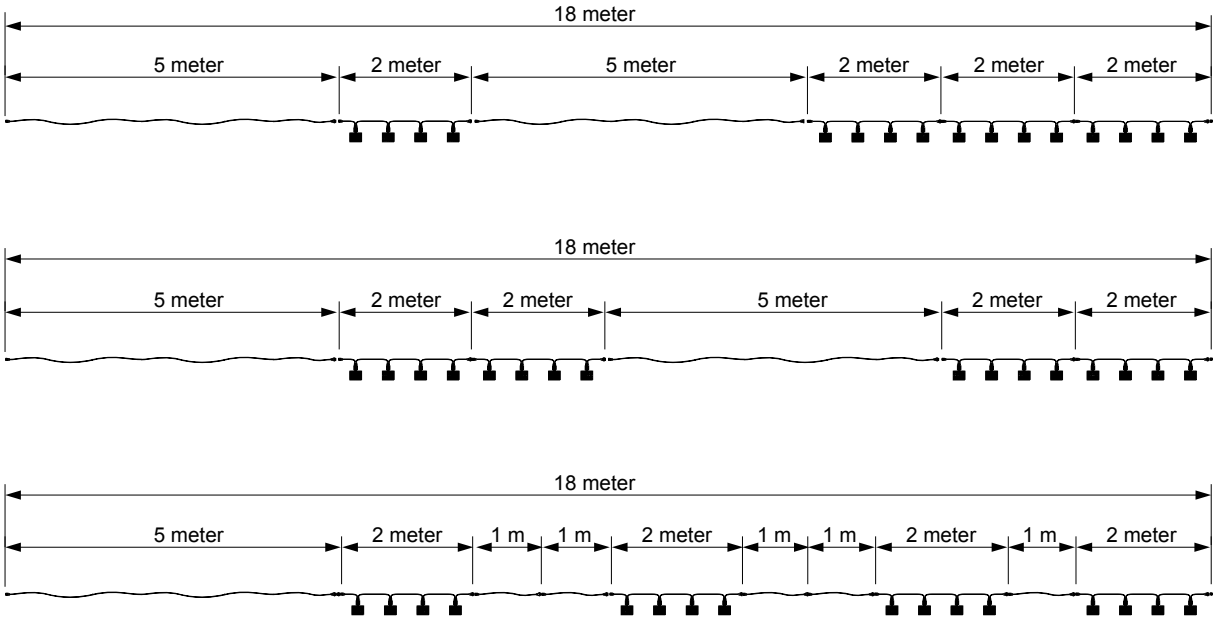


Image 9-15

Note that the above cabling possibility is illustrated with OLite 510 modules. Nevertheless, the same possibilities are valid for the OLite 612 modules as well, but with the limitation of maximum 12 OLite 612 modules per output port and maximum 48 OLite 612 modules per control box.

CAUTION: Never activate the boost mode for an OLite 510 system. Neglecting this will result in damaged OLite 510 modules and cables.

9.4 OLite creativity example

Cabling example

The illustration below shows an interconnection diagram of the OLite 510 modules and the output ports of the control box. The six output ports of the control box are used and all extension cables in the cabling have a length of 1 meter. Each output port has the same module cabling configuration. The modules are placed vertically (portrait). Note that the workspace dimensions for this configuration need to be set, via the control software (Director toolset), to 64 pixels horizontal and 256 pixels vertical.

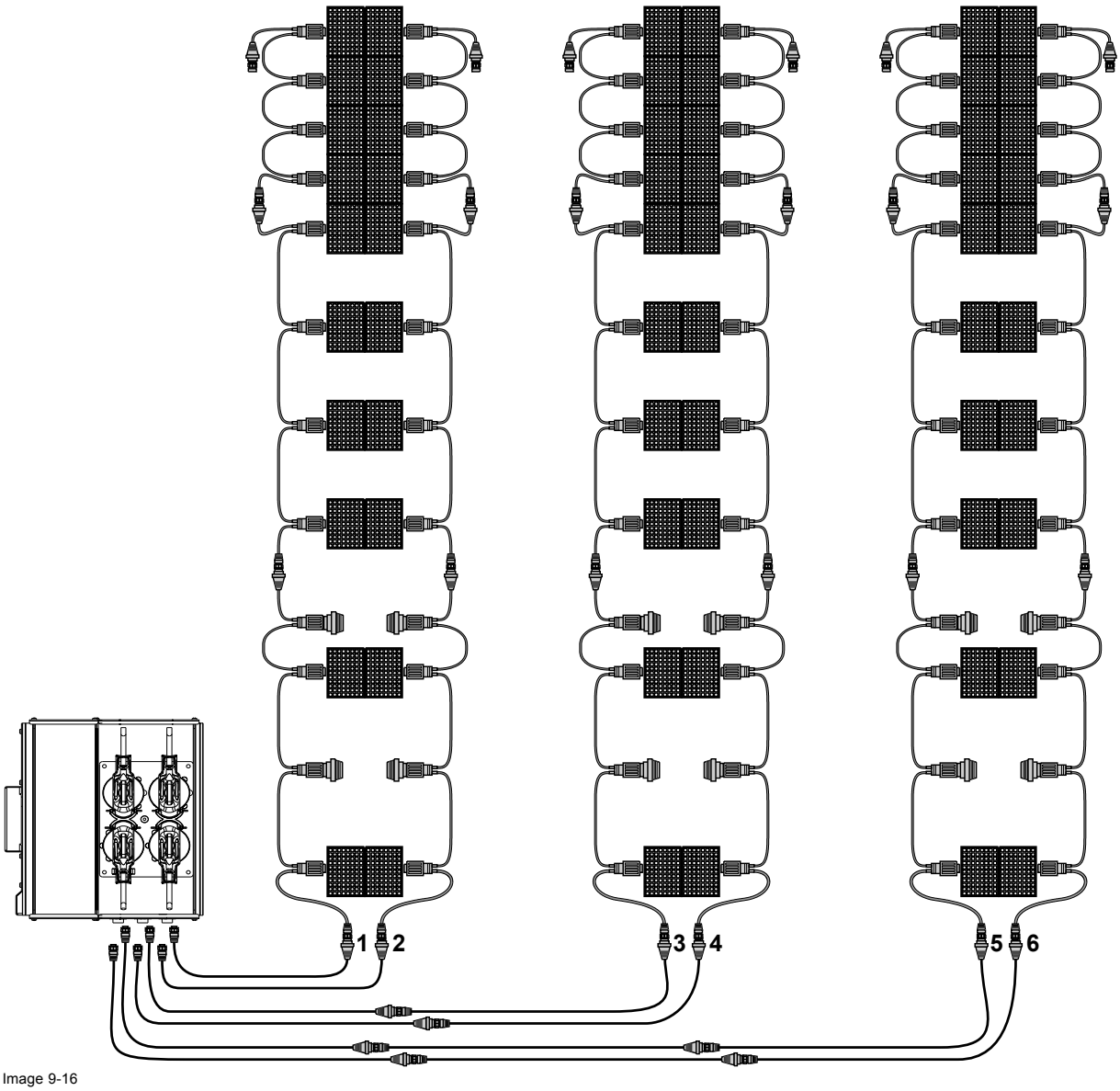


Image 9-16

Cabling checklist:

1. Maximum number of modules per output port ≦ 16 OLite 510 or ≦ 12 OLite 612 modules?	Yes → maximum 10 OLite 510 modules connected to one port.
2. Maximum number of modules per control box ≦ 64 OLite 510 or ≦ 48 OLite 612 modules?	Yes → Only 60 OLite 510 modules connected with the control box.
3. Placement angle of modules equal to 0°, 90°, 180° or 270°?	Yes → All modules placed vertically.
4. Number of module dummy plugs placed in series between two modules ≦ 3?	Yes → 1
5. Controller - module distance ≦ 5 meter?	Yes → longest distance is 3 meter (output port 5 and 6).
6. Module - module distance ≦ 5 meter?	Yes → no extension cables used between modules.

7. Total cable string length $\leqq$ 18 meter?	Yes → longest cable string is 6 meter (connected with output port 5 and 6). Three extension cables of 1 meter and three module cable strings of 2 meter.
8. Use of 5 meter extension cable to bridge distances of 5 meter?	Longest bridging distance is 3 meter (output port 5 and 6). No 5 meter extension cable required.
9. Are all unused output ports and all cable strings sealed with a cover?	Yes → 6 covers used to seal the 16 pins sockets.

10. MAINTENANCE

Overview

- Cleaning OLite tiles

10.1 Cleaning OLite tiles

Why cleaning OLite tiles ?

Due to outdoor use the OLite tiles are exposed to all kinds of weather conditions. Sand, dust, smog and other dirt adhere on the OLite tiles and because of that the performance of the OLite tiles can be reduced. That's why cleaning the OLite tiles is recommended at regular intervals.

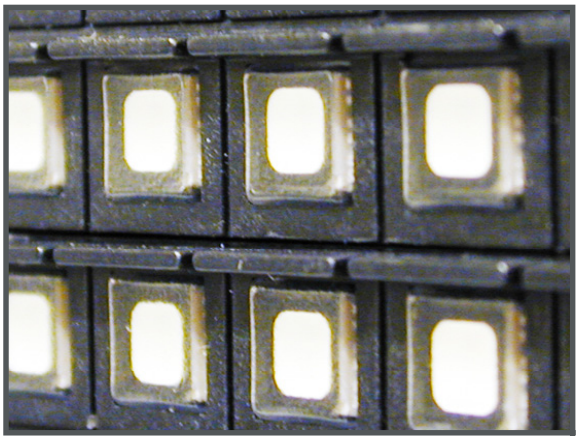


Image 10-1
Clean LED's and shaders of the OLite tile.

Always clean all tiles of the LED-wall to avoid brightness differences between cleaned and uncleaned OLite tiles.

Necessary tools

- Vaporizer with a non aggressive detergent.
- Soft hand brush with long hair.
- Garden hose with a spray nozzle.
- Compressed air.

How to clean OLite tiles ?

1. Seal up the data and power sockets of the control box with a power and data linking cable. Make sure that all plug holder clamps are locked firmly.
2. Ensure that the unused output ports of the control box are sealed with a cover.
3. Vaporize, through different directions, the non aggressive detergent on the shaders and LED's.
   Caution: *Do not use industrial grease removers. Use only materials or chemicals that are inert, nonabrasive, noncorrosive and non-marking.*
4. Brush down all dirt of the LED's and the shaders using a soft hand brush.
   Caution: *Do not use a hard bristled brush.*
5. Wash away the remaining soap with plenty of fresh water.
   Caution: *Do not submerge the tile fully or partly in water or other liquids.*
6. Repeat from step 3 until the tile is clean.
7. Blow the surface dry with compressed air.

The OLite tiles can also be cleaned while they are mounted. A solid scaffold or Z-lift is required to do so. Start cleaning from top row to bottom row using the above procedure.

11. OLITE OPTIONS

Overview

- Optional OLite back cover

11.1 Optional OLite back cover

Overview

- Back cover for OLite rental tiles
- Back cover installation procedure

11.1.1 Back cover for OLite rental tiles

Introduction

Some LED-wall applications require an aesthetic look for the rear of the LED-wall. Therefore, Barco offers an optional back cover system as a kit to close the rear of the OLite rental tile. The back cover system is attached to the OLite tiles before the tiles are placed into the OLite display. After installation of the back cover system the plastic cover plate can easily be removed, without tools, to access the OLite control box etc. OLite rental tiles equipped with a back cover still fit in the OLite rental flight case.

Kit order info

Art. No.	Description
R9853011	Package of four (4) back covers for OLite rental tiles.

Kit contents

The kit contains four plastic cover plates and the necessary parts for installation. Check the list below to ensure that the kit you received is complete.

- 4 plastic cover plates (A).
- 8 lock brackets (B), 2 per plastic cover.
- 8 support brackets (C), 2 per plastic cover.
- 48 nuts M6 (D), 12 per plastic cover.
- 48 hammer bolts M6 (E), 12 per plastic cover.

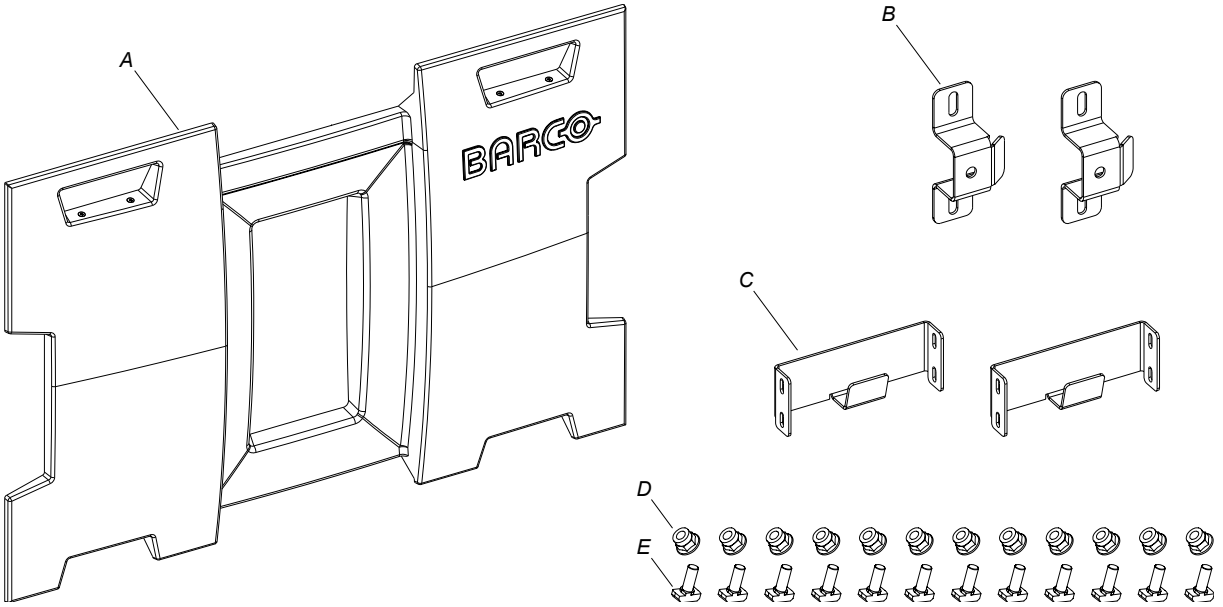


Image 11-1
Complete OLite back cover set for one tile.

11.1.2 Back cover installation procedure

What has to be done ?

Two support brackets and two lock brackets have to be attached to the rear of the OLite rental tile. Then the plastic cover can be latched onto the tile without tools.

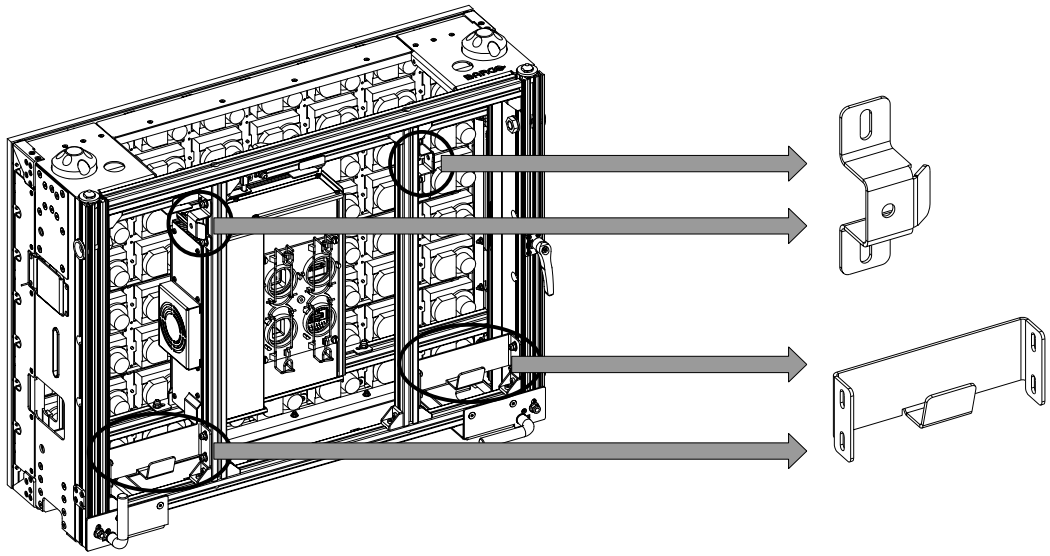


Image 11-2
Location of the support and lock brackets for the back cover.

Necessary tools

10 mm nut driver.

Necessary parts

- 2 support brackets.
- 2 lock brackets.
- 12 nuts M6.
- 12 hammer bolts M6
- Plastic cover plate.

How to install the back cover of an OLite rental tile ?

1. Fasten the two support brackets (A) to the bottom rear of the tile as illustrated. Use four M6 nuts (B) and four M6 hammer bolts (C) per bracket. Ensure that the support bracket (A) is mounted against the corner brackets (D) as illustrated.

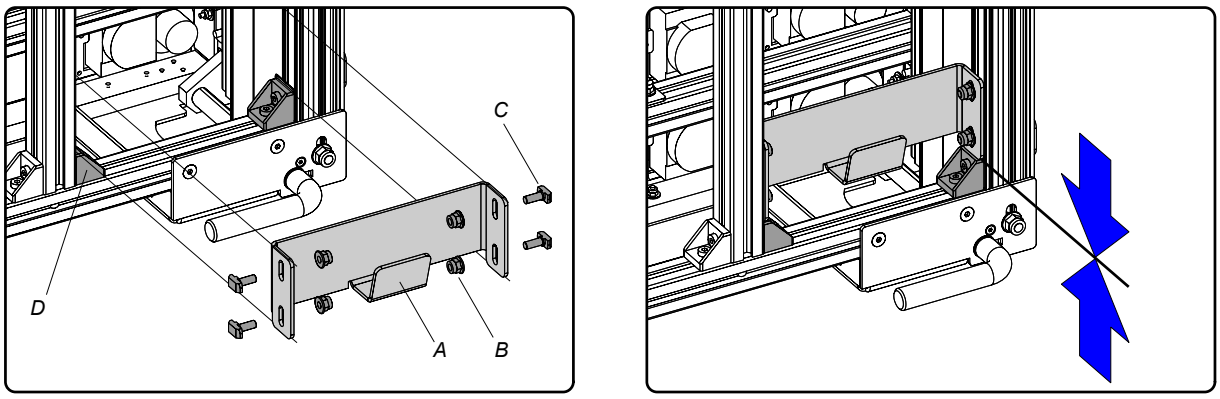


Image 11-3

2. Fasten the two lock brackets (A) to the inner vertical profiles at the rear of the tile as illustrated. Use two M6 nuts (B) and two M6 hammer bolts (C) per bracket. Ensure that the lock bracket (A) is mounted against the corner brackets (D) as illustrated.

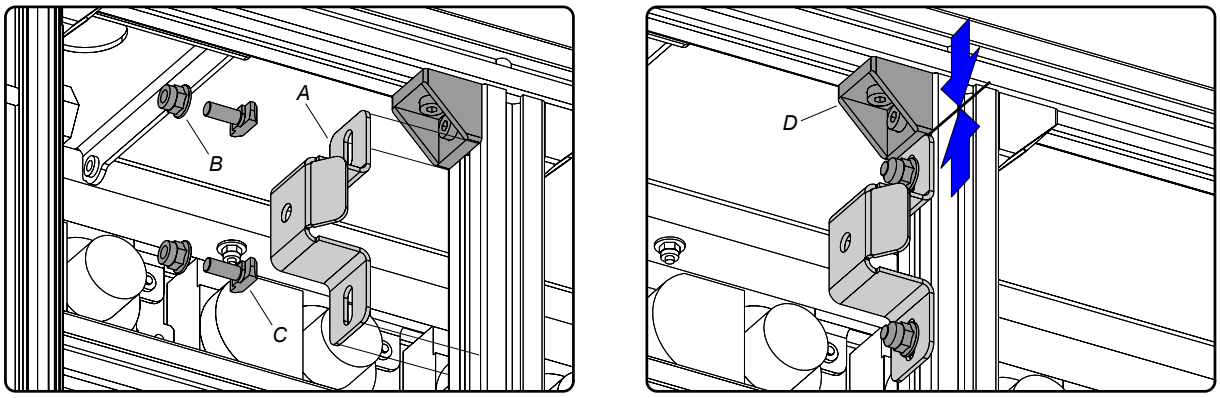


Image 11-4

3. Hook the plastic cover into the support brackets at the bottom as illustrated and then push the top of the cover plate against the tile until the latches of the cover plate snap behind the lock brackets. Note that the bottom of the cover plate is provided with two slots wherein the support brackets will fit. The inner side of the cover plate is provided with two latches at the top.

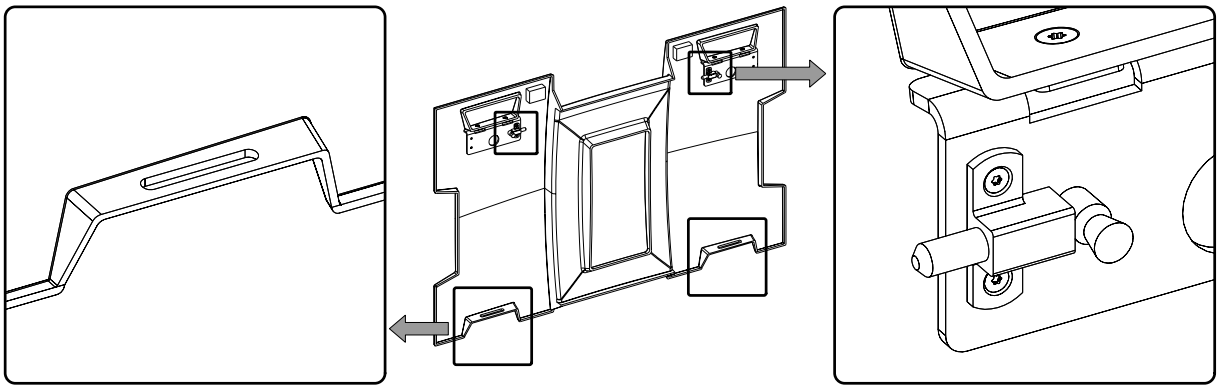


Image 11-5

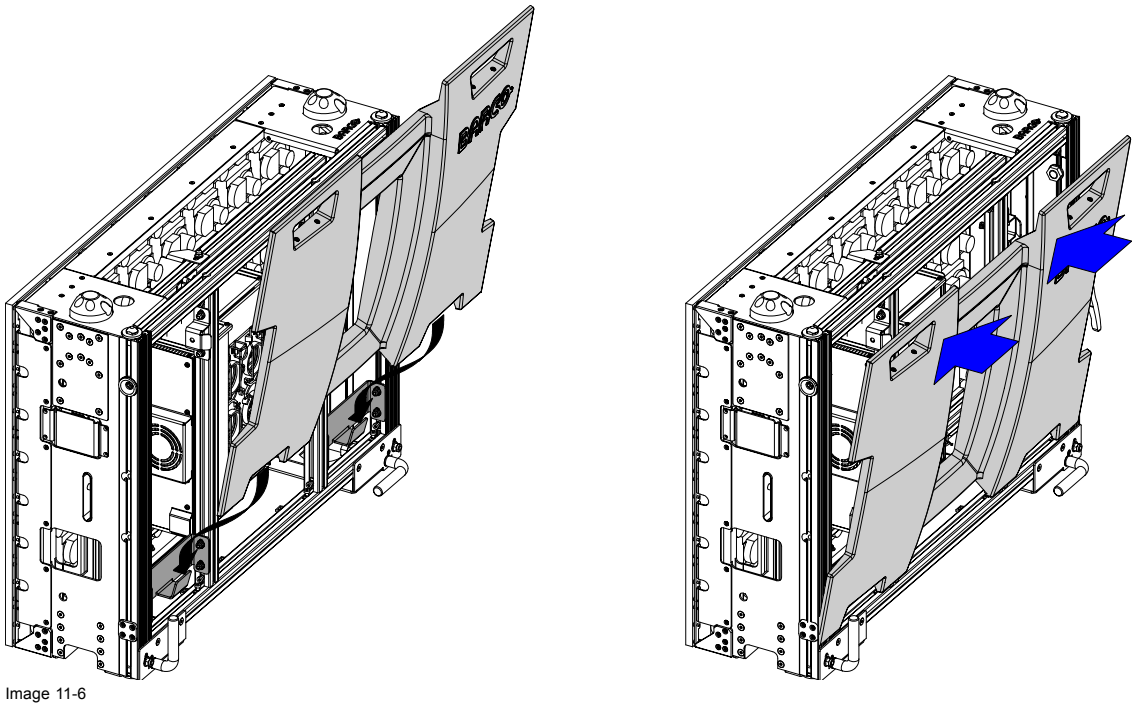


Image 11-6

To remove the plastic cover just unlock the latches and pull the cover away from the tile. The latches are accessible via the two holes at the top of the cover plate.

12. SERVICING

Overview

- Safety instructions
- OLite module diagnostic
- Replace the OLite control box
- Replacement of an OLite module on-site

12.1 Safety instructions

Personal protection

WARNING: Ensure you understand and follow all the safety guidelines, safety instructions, warnings and cautions mentioned in this manual.

WARNING: Be aware of suspended loads.

WARNING: Wear a hard hat to reduce the risk of personal injury.

WARNING: Be careful while working with heavy loads.

WARNING: Mind your fingers while working with heavy loads.

Safety precautions

- Fence off a restricted area of at least 3 meters around the LED-wall using an eye-catching fence and “KEEP OUT” signs. This to prevent unauthorized persons coming near the LED-wall during servicing.
- Inspect the complete LED-wall for security, wear, deformation, corrosion, and any other circumstances that may affect the load handling capability of the part.
- Do not modify and/or replicate any component. Barco uses specific materials and manufacturing processes in order to achieve part strength. No other parts than Barco parts are allowed.
- Both hands must be free for servicing OLite tiles in an LED-wall. Therefore the use of a ladder to access a tile is forbidden. Only the use of a scaffold or a Z-lift is allowed.

12.2 OLite module diagnostic

Status LED's OLite module

The OLite module is provided with two status LED's. One green and one red LED. The two status LED's are located just below the external fan. The red LED indicates the status of the software and the microprocessor. The green LED indicates the status of the incoming data and sync.

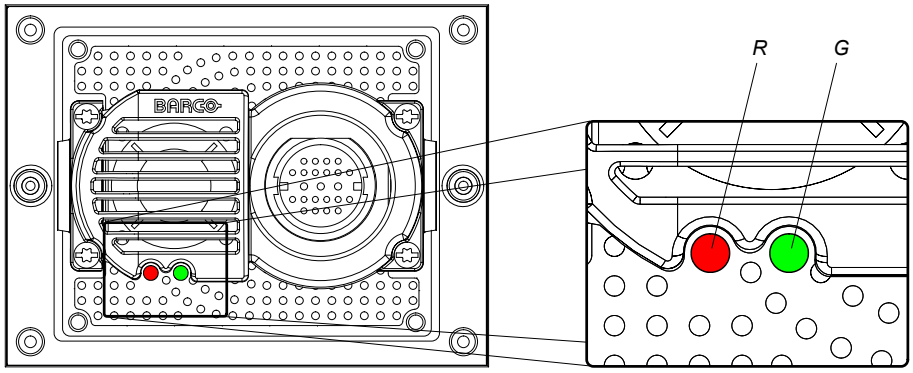


Image 12-1
Location of status LED's on the OLite module.

R Red colored status LED.
G Green colored status LED.

Diagnostic

Red LED	Green LED	Diagnostic	Action
OFF	OFF	OLite module has no power	Check connections with cable string.
Flashing (40 ms)	OFF	Software of the OLite module is corrupt .	Replace OLite module.
Flashing (500 ms)	OFF (or ON)	OLite module receives no data.	Check status of OLite modules connected with the same cable string. • Different status: replace OLite module. • Same status: set the control box in internal mode (see manual control software). If the status of all modules remains the same, replace the control box. If only the status of this module remains the same, replace this OLite module.
Flashing (500 ms)	Flashing (160 ms)	OLite module functions normally.	—

12.3 Replace the OLite control box

How to replace the OLite control box ?

1. Read and heed the servicing safety instructions.
2. Disconnect the power and data linking cables from the OLite control box.
   Caution: *Always disconnect the power cord from the OLite control box before connecting or disconnecting the module cable strings to the output ports. Neglecting this may result in a damaged control box.*
3. Disconnect the cable strings from the OLite control box.
4. Remove the safety cable from around the carrying handle of the OLite control box.
5. Unlock the OLite control box by pulling up the latch above the control box mounting plate as illustrated.

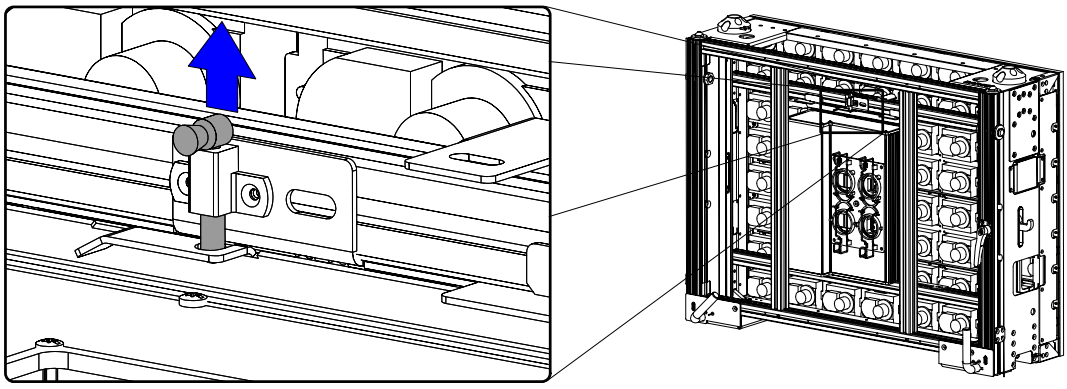


Image 12-2
Unlock the OLite control box.

6. Remove the control box by sliding the mounting plate to the right as far as possible and then lift out the whole unit.

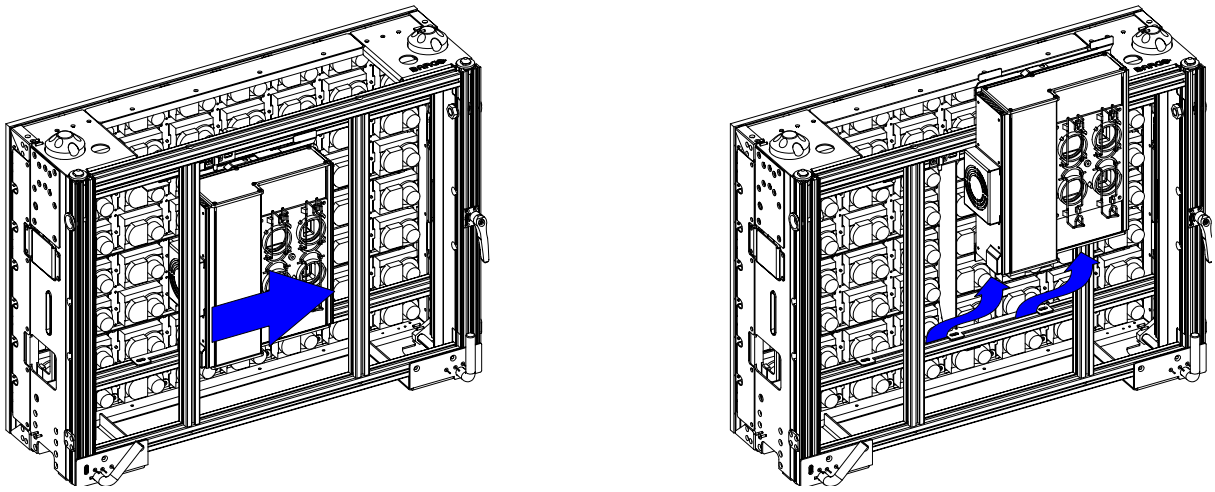


Image 12-3
Remove the control box.

7. Place a new OLite control box with mounting plate in the same position as the previously removed control box.
8. Secure the control box with mounting plate by sliding the mounting plate to the left as far as possible.
   Warning: *Ensure the mounting plate is locked.*
9. Place the safety cable around the carrying handle of the OLite control box and twice around the inner horizontal profile of the rental frame.

Image 12-4
Safety cable around the carrying handle and twice around horizontal profile.

10. Reconnect all the cable strings with the OLite control box.

11. Reconnect the power and data linking cables with the OLite control box.
Warning: *Ensure that all plug holder clamps of the power and data cables are locked.*

Ensure that the locking cap of each plug of the cable strings is turned clockwise as far as possible.

12.4 Replacement of an OLite module on-site

This procedure is illustrated with OLite 510 modules. Nevertheless, the same procedure is valid for OLite 612 modules as well.

WARNING: Always use this procedure on OLite modules which are mounted in the display. The use of a module safety cable is compulsory.

WARNING: ALWAYS disconnect the power cord from the OLite control box before connecting or disconnecting the module cable string or one of the OLite modules.

CAUTION: Handle the OLite 510 modules with care. Note that the foil, covering the LED's, is made of thin polycarbonate. This foil ensures that the OLite 510 module has an IP65 protection rating.

Necessary tools

OLite module safety cable (R9853390).

How to replace an OLite module in a display with back access ?

1. Read and head the servicing safety instructions.
2. Disconnect the power cord from the OLite control box which drives the OLite module you want to replace.
3. Disconnect the OLite module from the cable string by unscrewing the captive lock of the plug and then pull out the plug.

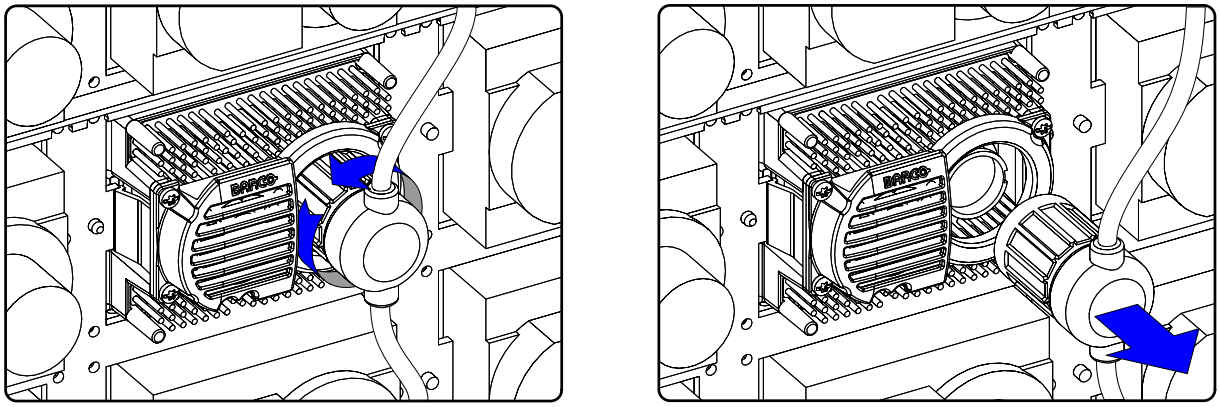


Image 12-5

4. Attach a module safety cable with the electrically disconnected OLite module as illustrated.

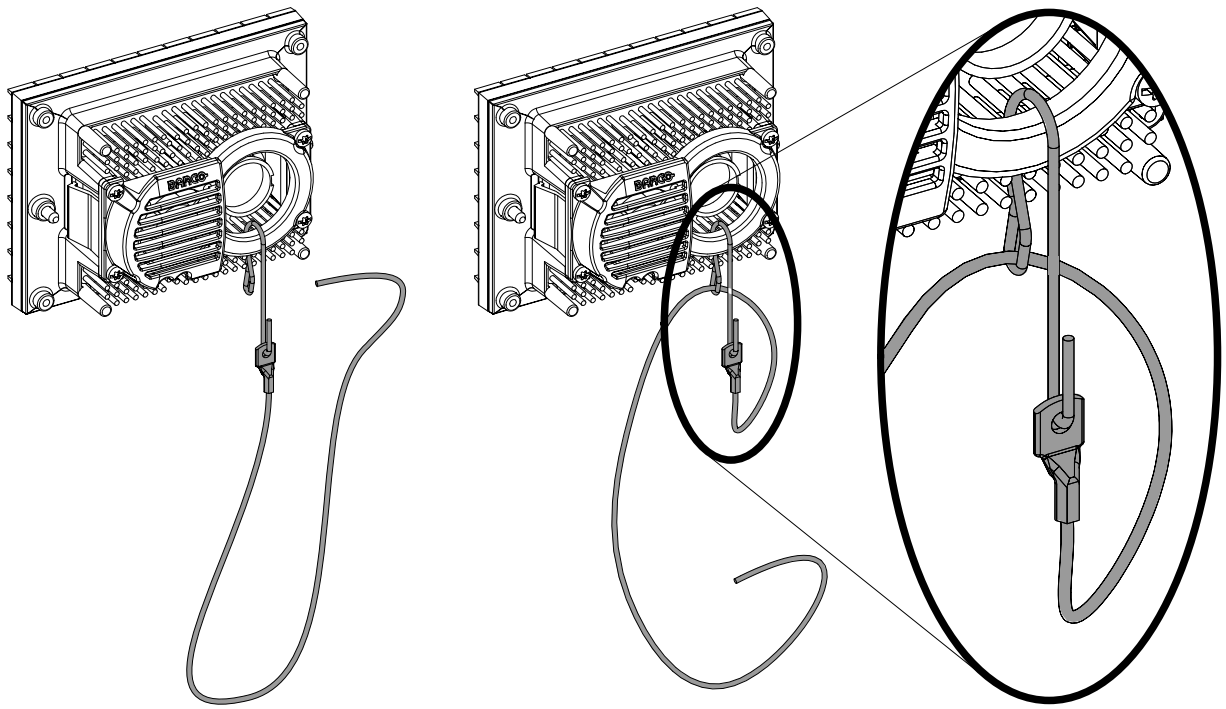


Image 12-6

5. Attach the other end of the module safety cable to the frame of the OLite display.
6. Release the OLite module from the grid by pressing the two latches at the side of the module together and pushing the module forward out of the grid at the same time.
   Warning: *Ensure you have a good grip on the OLite module while releasing the module.*

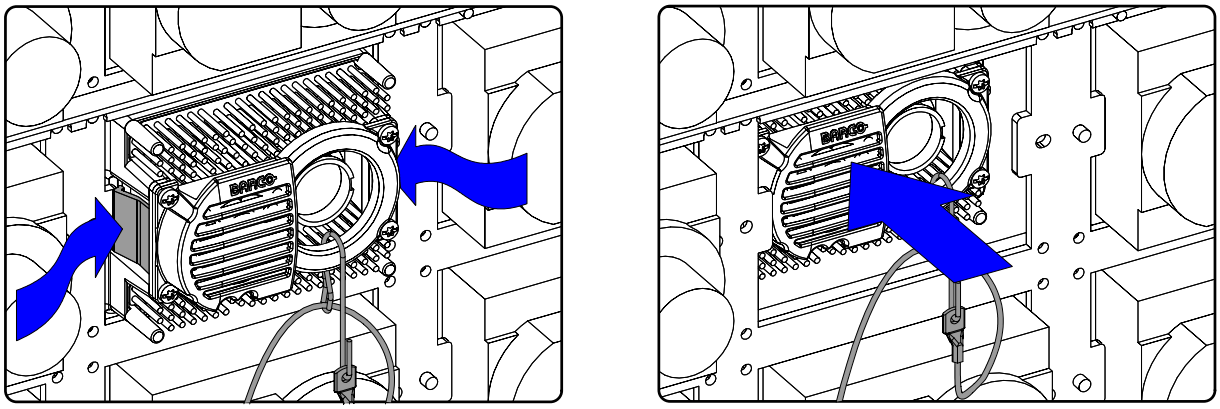


Image 12-7

7. Guide your hand with the OLite module further through the grid opening, rotate the module, and pull the module back through the grid opening.

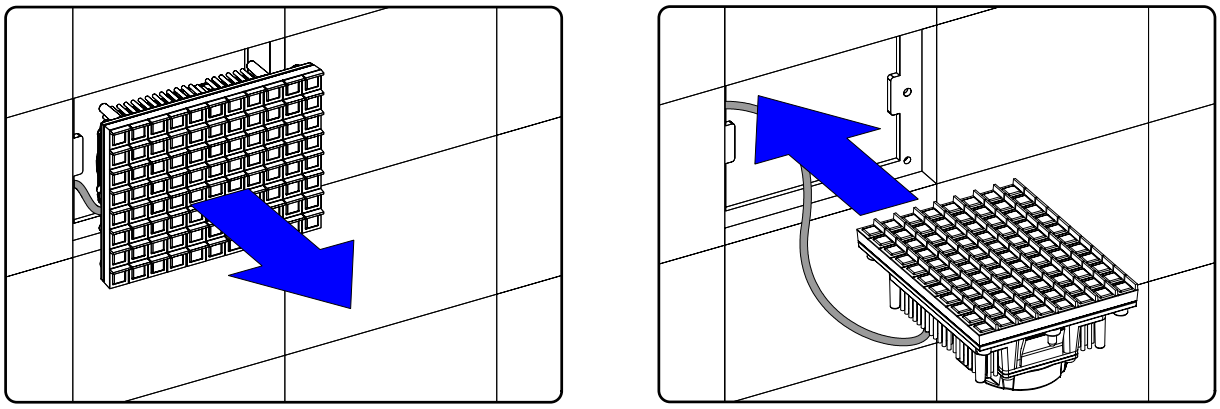


Image 12-8

8. Attach a module safety cable with a new OLite module as illustrated in image 12-6 and attach the other end of the module safety cable to the frame of the OLite display.
9. Guide the new OLite module (with safety cable) through the grid opening, rotate it and snap the module into the grid.
   Caution: *Ensure to orient the OLite module correctly while snapping in. The connector socket must be at the right seen from the rear of the display.*
10. Reconnect the new OLite module with the cable string doing the following:
    a) approach the socket of the module with the cable plug at right angles and with the cable entrance and exit of the plug vertically oriented.
    b) push the plug completely into the socket.
    c) fasten the captive lock of the plug.

    Caution: *Be careful while connecting the cable string to the OLite module to prevent damage of the socket pins.*

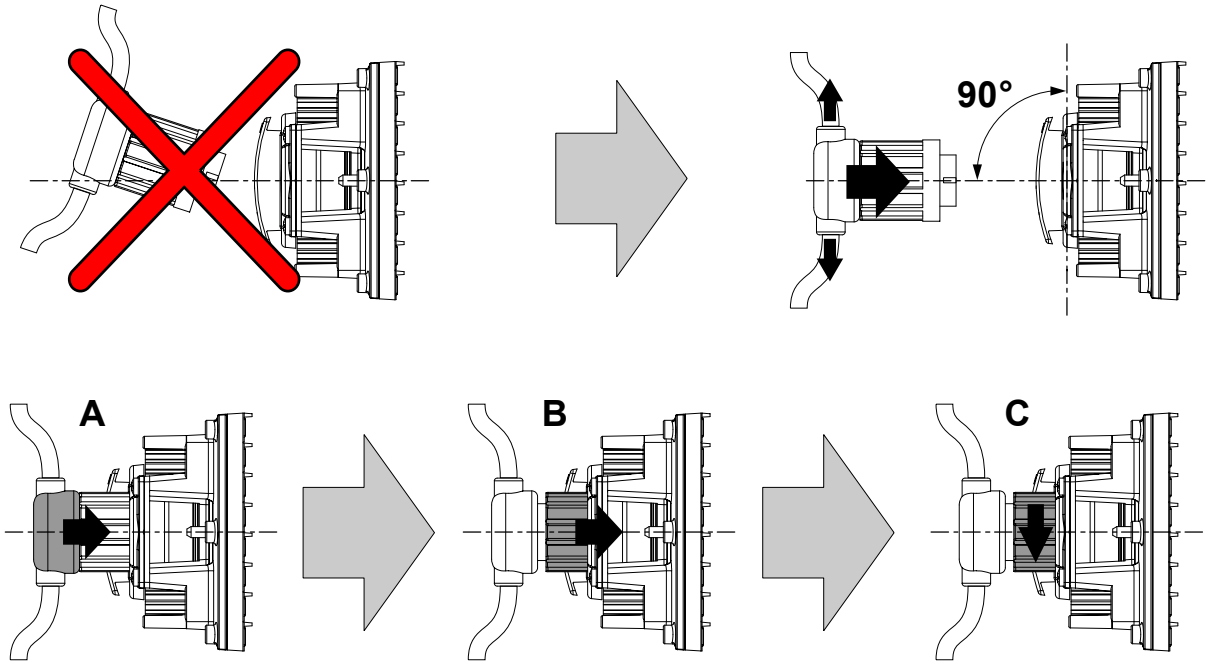


Image 12-9

11. Reconnect the power cord of the OLite control box.

When replacing an OLite module, re-calibration is required to adapt the color uniformity and brightness of the new module with the other modules.

A. DIMENSIONS

Overview

- Dimensions of an OLite rental tile
- Dimensions of an OLite module
- Dimensions of an OLite control box
- Dimensions of an OLite flight case
- Dimensions of an OLite truss beam
- Dimensions of an OLite foot
- Dimensions of an OLite stacker system
- Dimensions of the foot beams

A.1 Dimensions of an OLite rental tile

Dimensions OLite frame

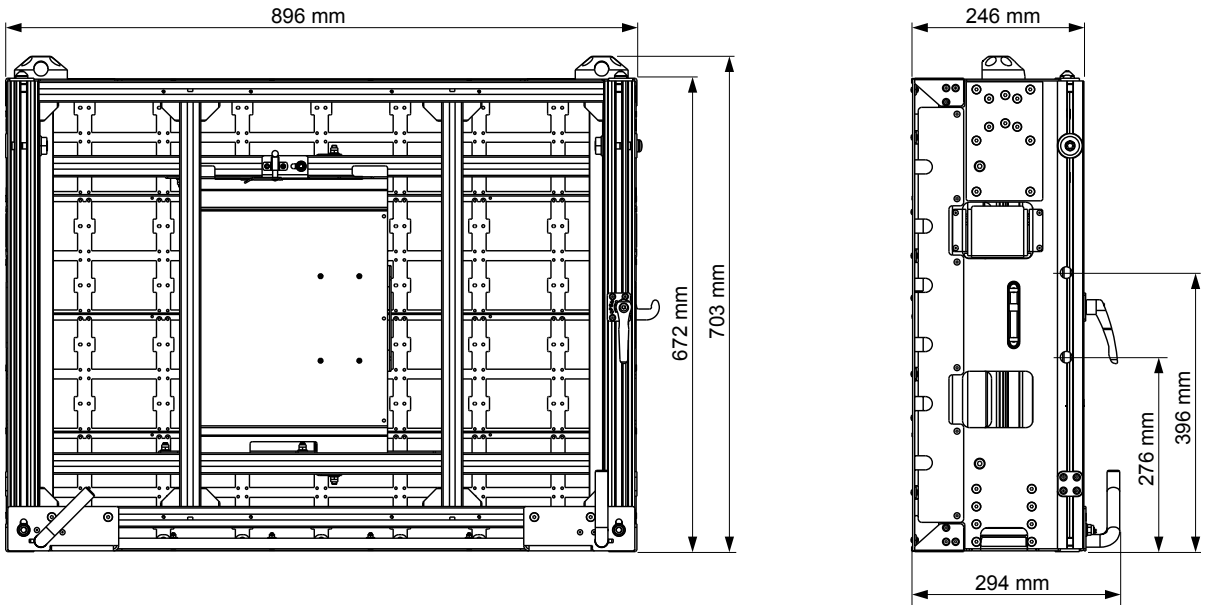


Image A-1

Dimensions OLite frame with OLite 510 modules

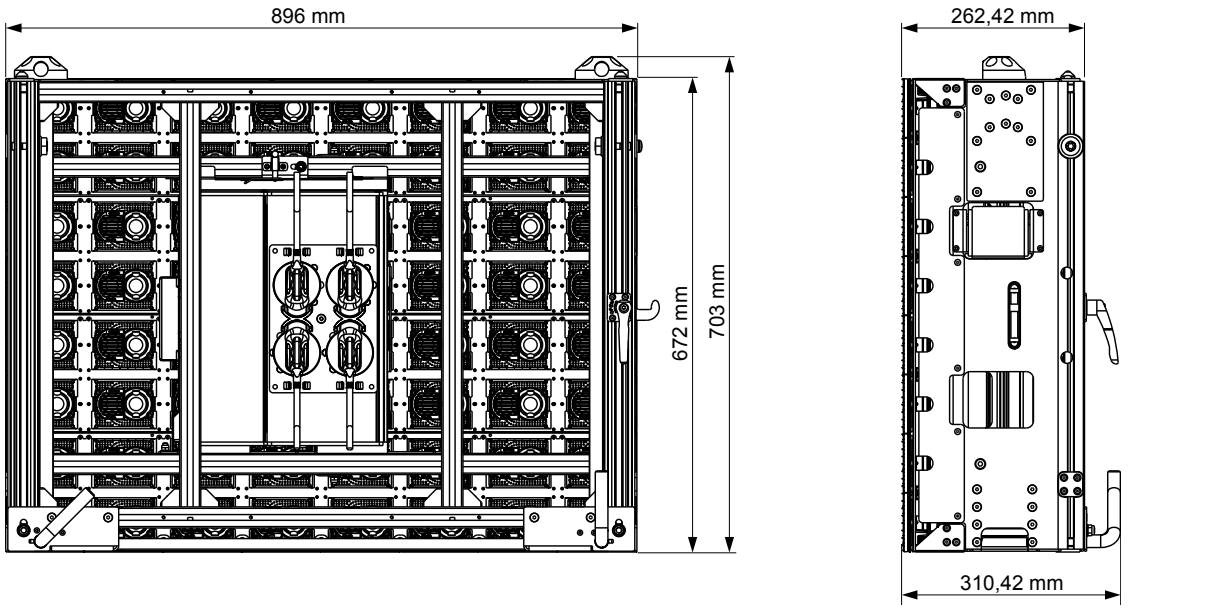


Image A-2

Dimensions OLite frame with OLite 612 modules

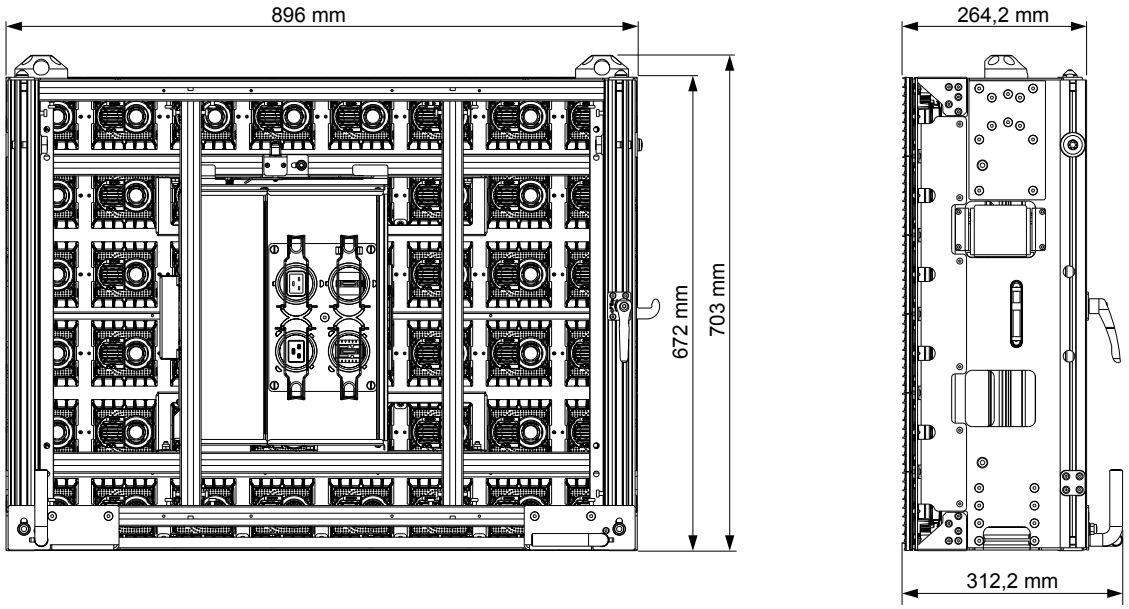


Image A-3

A.2 Dimensions of an OLite module

Dimensions of an OLite 510 module

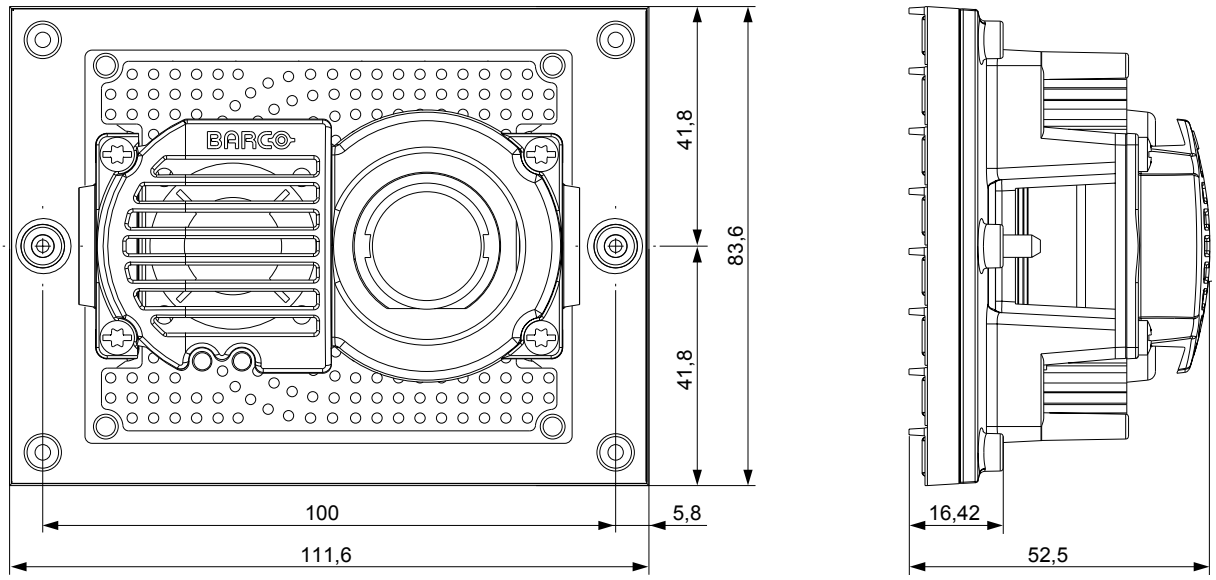


Image A-4
Dimensions given in millimeters.

Dimensions of an OLite 612 module

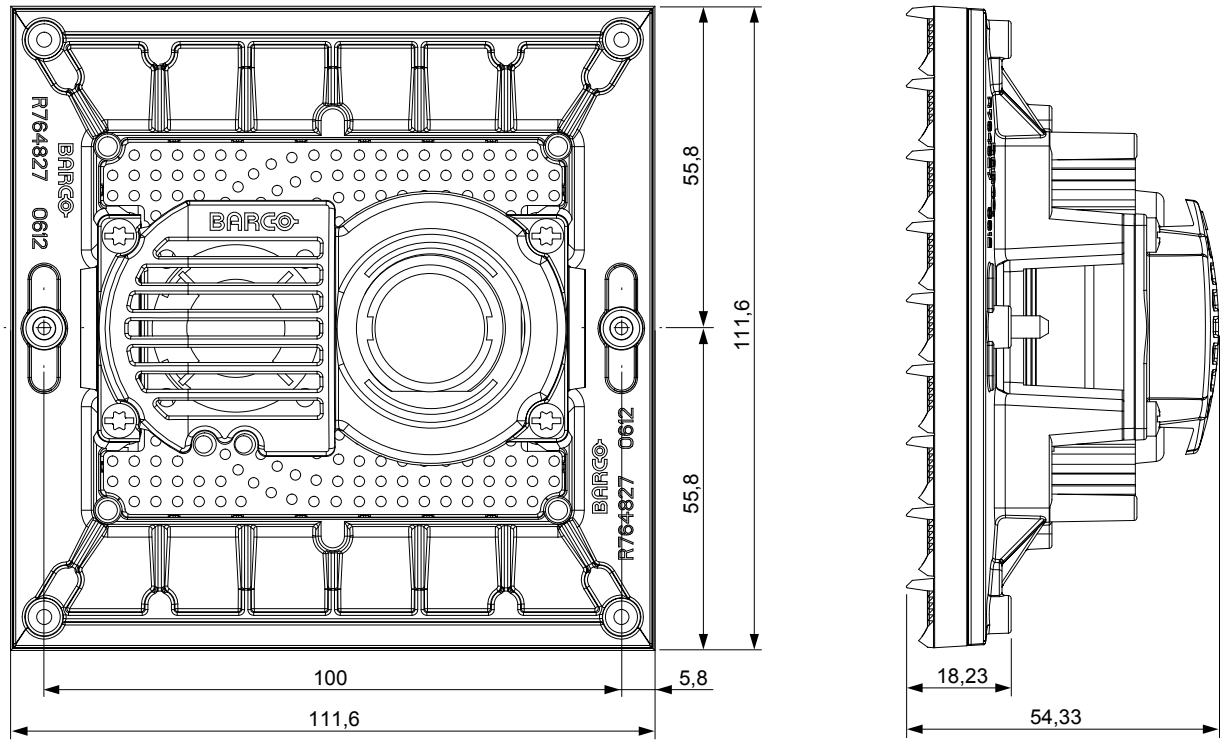


Image A-5
Dimensions given in millimeters.

A.3 Dimensions of an OLite control box

Dimensions

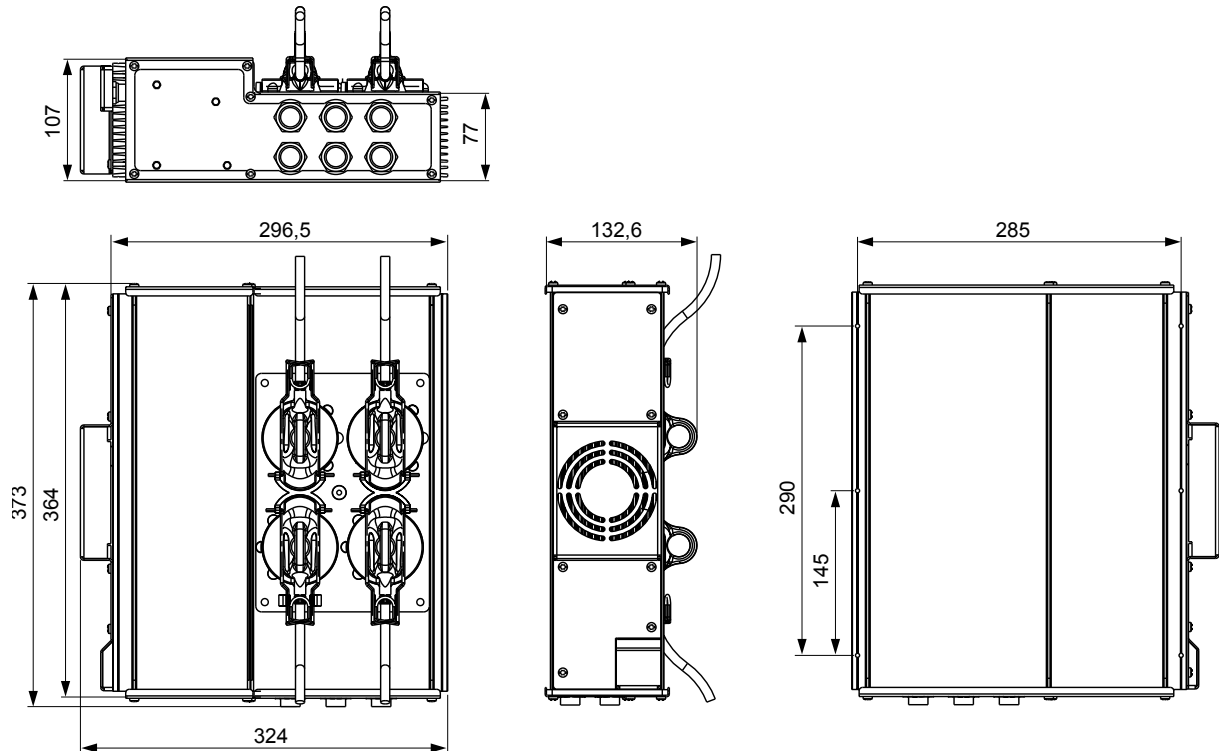


Image A-6
Dimensions given in millimeters.

A.4 Dimensions of an OLite flight case

Dimensions

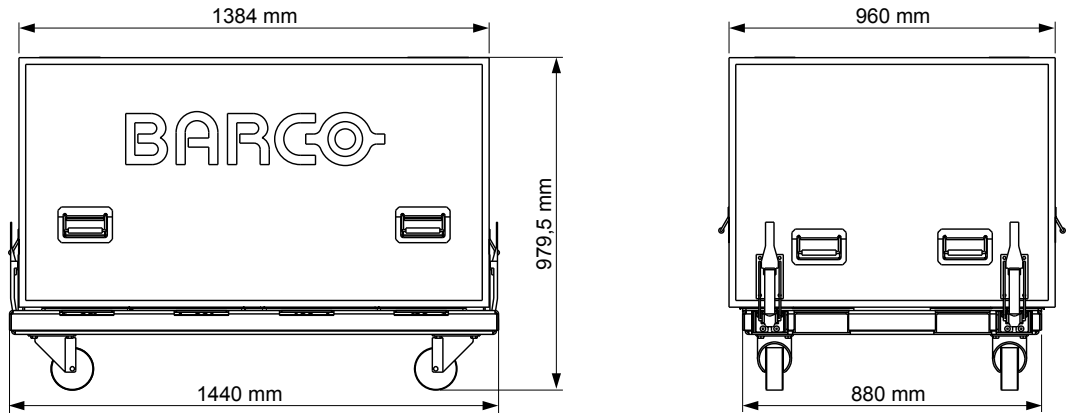


Image A-7

A.5 Dimensions of an OLite truss beam

Dimensions single truss beam

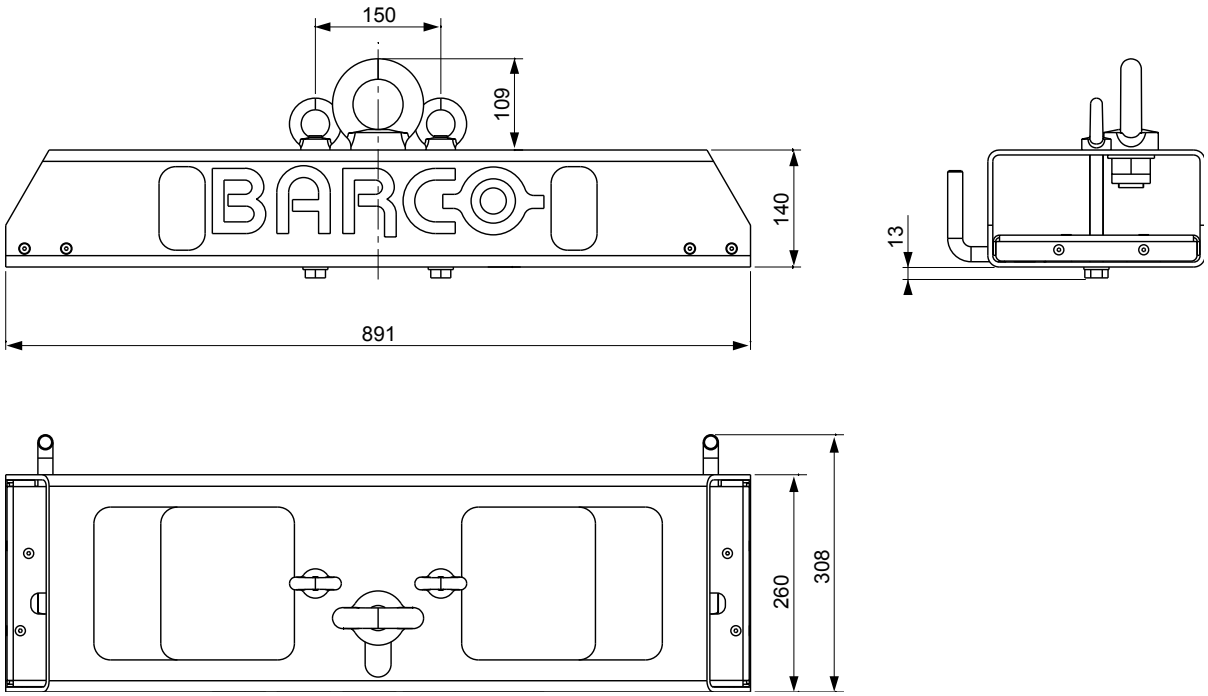


Image A-8
Dimensions given in millimeters.

Dimensions dual truss beam

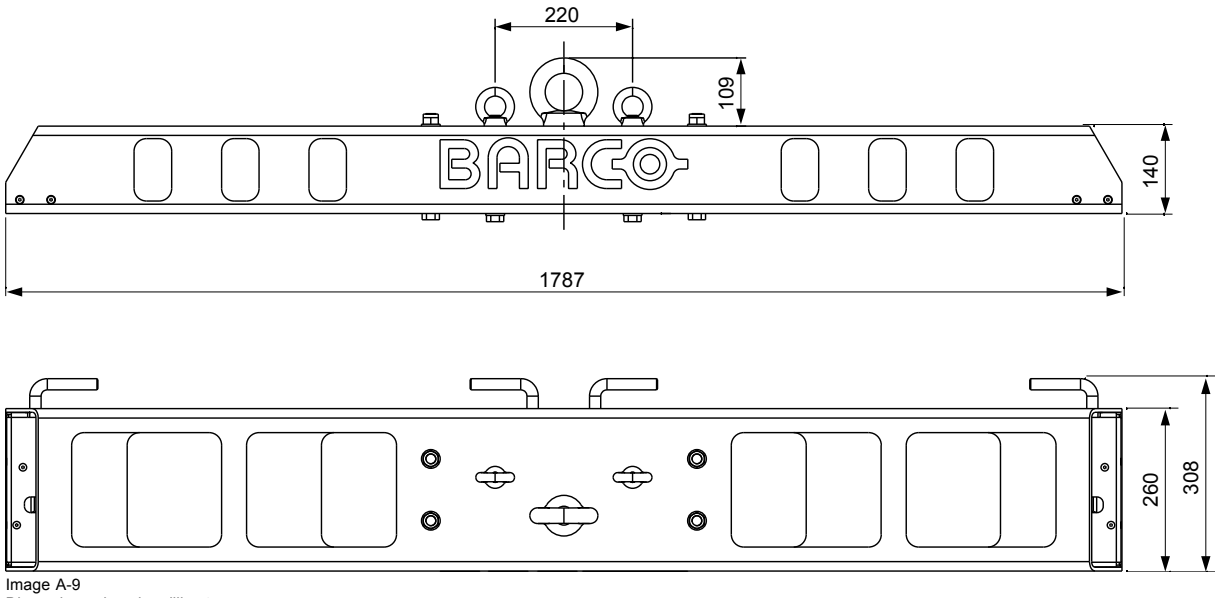


Image A-9
Dimensions given in millimeters.

A.6 Dimensions of an OLite foot

Dimensions

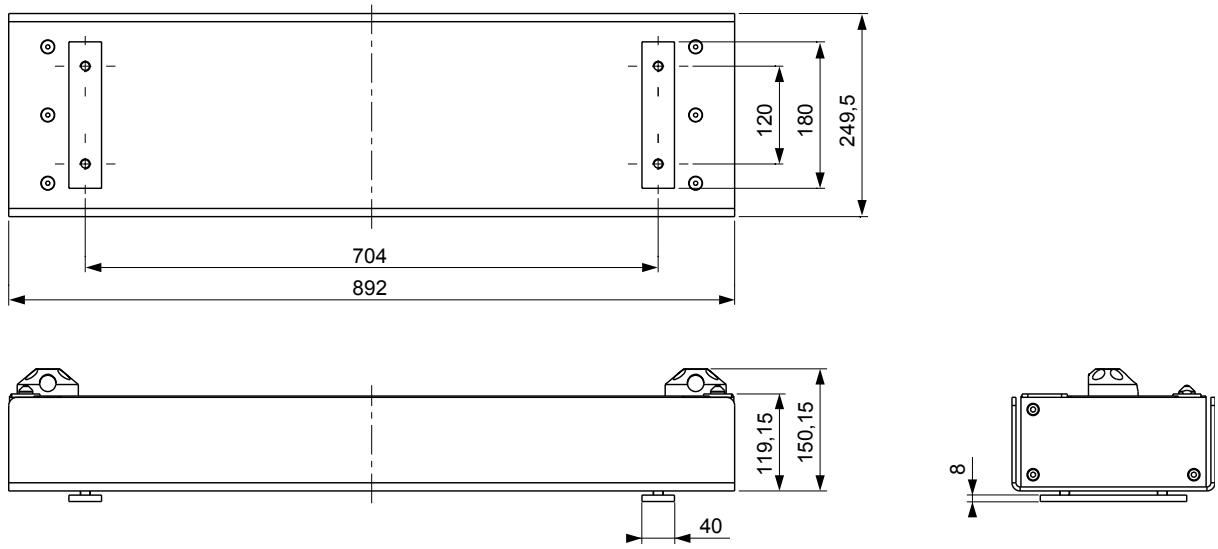


Image A-10
Dimensions given in millimeters.

A.7 Dimensions of an OLite stacker system

Dimensions stacker foot

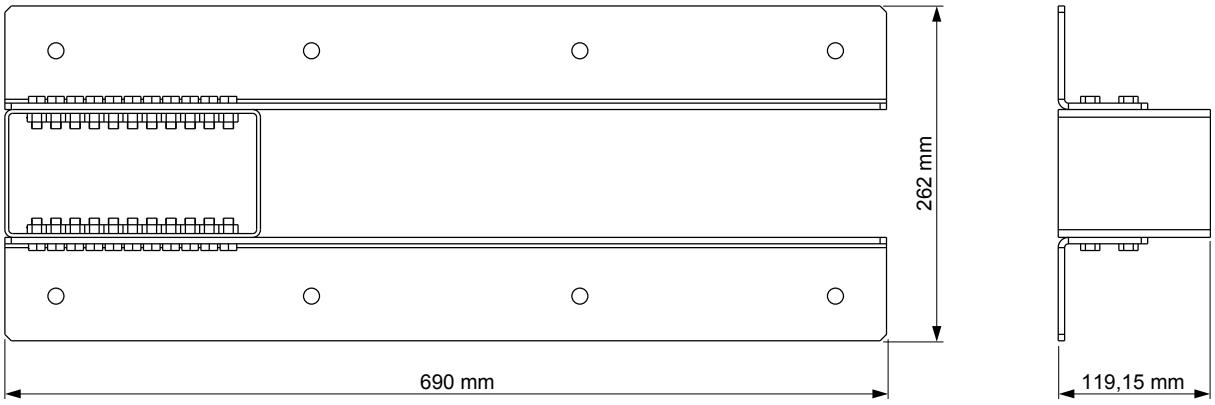


Image A-11

Dimensions stacker profile

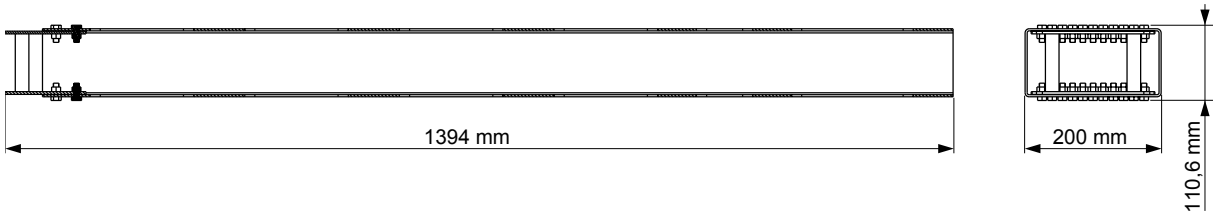


Image A-12

Dimensions stacker bridge

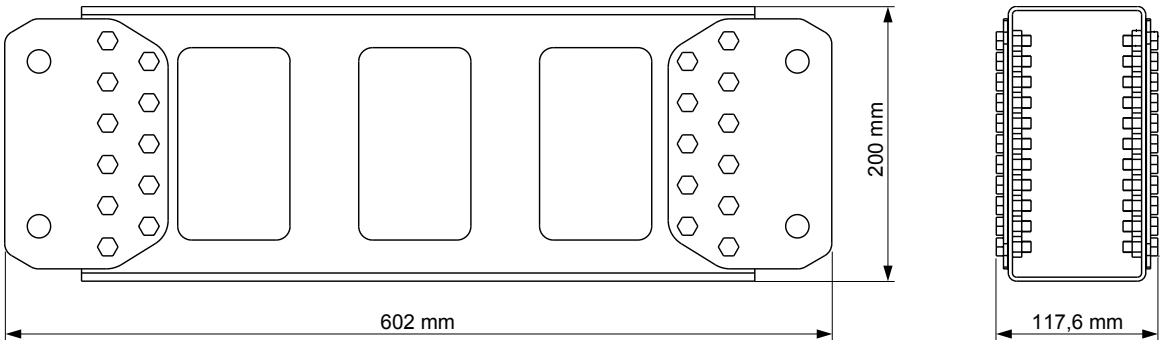


Image A-13

A.8 Dimensions of the foot beams

Dimensions foot beams

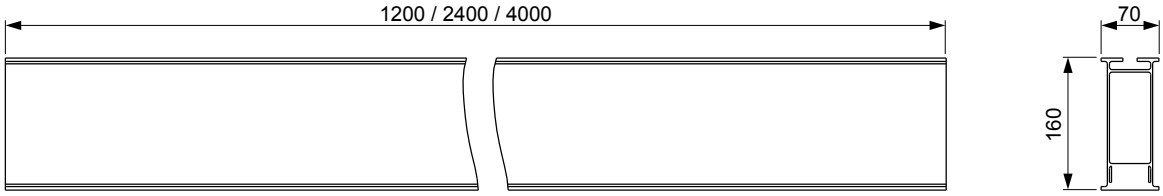


Image A-14
Dimensions given in millimeters.

B. SPECIFICATIONS

Overview

- Specifications of the OLite 510 rental tile
- Specifications of the OLite 612 rental tile
- Weight of individual parts of an OLite rental display
- Ballast values for a base stand OLite display
- Ground pressure of a base stand OLite display

B.1 Specifications of the OLite 510 rental tile

Specifications

Lifetime	50.000 hours
Pixel pitch	10 mm
Calibrated Brightness	5000 NIT
LED configuration	3-in-1 SMD
Pixel density	5.632 LEDs per tile (88 x 64 px)
Hor. viewing angle	> 145°
Vert. viewing angle	> 95°
Contrast	810
Power consumption	970 W/tile (max) 275 W/tile (average)
Weight / Tile	58 kg (127.9 lbs)
Processing	15,8 bit per color at 50Hz
Colors	185 trillion
Refresh rate	800 Hz minimum (PAL/NTSC)
Operating temperature range	-20 to 45°C (-4 to 113°F)
Operational humidity	10 - 99%
D320 input compatibility	S-Video, Composite, YUV, RGB, SDI, HDSDI, Data: DVI up to UXGA
Certifications	UL, CE, FCC Class A, TUV
Storage temperature	-20 to 60°C (-4 to 140°F)
Storage humidity	10 - 99%
Truss build-up	Max. 15 tiles high
Foot build-up	Max. 12 tiles high

B.2 Specifications of the OLite 612 rental tile

Specifications

Pixel pitch	12 mm
Calibrated Brightness	6,000 Nit
LED configuration	3-in-1 SMD
Pixel density	3,888 LEDs per tile (72x54)
Hor. viewing angle	> 145°
Vert. viewing angle	> 80°
Lifetime	50,000 hours
Power consumption	800 W/tile (max) 230 W/tile (average)
Weight / Tile	58 kg (127.9lbs)
Processing	15.8 bit per color at 50 Hz
Colors	185 trillion
Refresh rate	800 Hz minimum (PAL/NTSC)
Operating temperature range	-20 to 45 °C (-4 to 113 °F)
Storage temperature	-20 to 60 °C (-4 to 140 °F)
Operational humidity	10 - 99%
Storage humidity	10 - 99%
D320 input compatibility	S-Video, Composite, YUV, SDI, HDSDI, Data: Analog + DVI up to UXGA
Certifications	UL, CE, TUV, FCC Class A
Truss build-up	Max. 15 tiles high
Foot build-up	Max. 12 tiles high
Contrast	1120

B.3 Weight of individual parts of an OLite rental display

Weight of individual parts

OLite control box	8 kg
OLite 510 module	360 gram
Total weight 4 OLite 510 cable strings	3 kg
OLite 612 module	480 gram
Total weight 4 OLite 612 cable strings	3 kg
OLite rental frame (without control box, modules and cables)	24 kg
OLite single truss beam	30,7 kg
OLite dual truss beam	62 kg
OLite rental foot	33 kg
Stacker foot (include 2 stacker foot rails)	14 kg
Stacker bridge	8 kg
Vertical stacker profile	15 kg
Foot beam 1,2 meter	4,8 kg
Foot beam 2,4 meters	9,6 kg
Foot beam 4 meters	16 kg

B.4 Ballast values for a base stand OLite display

All calculations are based upon a wind load of 0,8 kN/m² (±129 km/h) which comply with the TUV regulations. For more information consult the "Ballast calculator" tool, available on Barco's web site.

The ballast values are given per OLite rental foot mounted upon two foot beams. Ballast must be placed upon the last 30 cm of the foot beams.

Minimum ballast values for an OLite display installed at the front of the foot beams

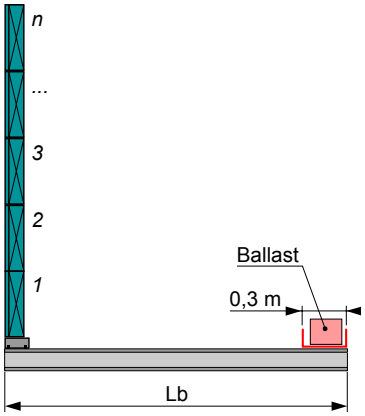


Image B-1

Single OLite rental foot			
Height Tiles	1,2 meter foot beams (Lb) Minimum ballast (kg)	2,4 meter foot beams (Lb) Minimum ballast (kg)	4 meter foot beams (Lb) Minimum ballast (kg)
1	63	29	17
2	150	70	41
3	266	124	73
4	423	197	115
5	620	289	169
6	857	400	234
7	1134	529	309
8	1451	677	396
9	1809	844	493
10	Not allowed	Not allowed	Not allowed
11	Not allowed	Not allowed	Not allowed
12	Not allowed	Not allowed	Not allowed

Position OLite display upon foot beams for minimum ballast

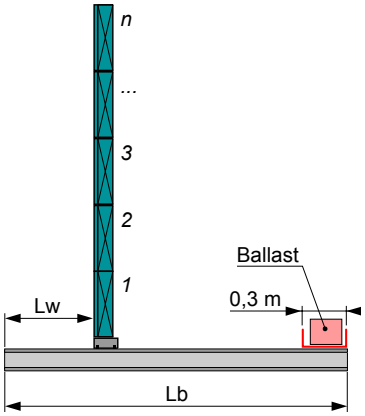


Image B-2

Single OLite rental foot			
Height Tiles	**Used foot beam (Lb)**	**Beam length in front of display (Lw)**	**Minimum ballast (kg)**
1	2,4 meter	> 0,93 meter (maximum 1,2 meter)	0
2	2,4 meter	> 1,11 meter (maximum 1,2 meter)	0
3	4 meter	> 1,32 meter (maximum 1,2 meter)	0
4	4 meter	> 1,57 meter (maximum 2 meter)	0
5	4 meter	> 1,84 meter (maximum 2 meter)	0
6	4 meter	in the middle of the foot beam	13
7	4 meter	in the middle of the foot beam	52
8	4 meter	in the middle of the foot beam	102
9	4 meter	in the middle of the foot beam	162
10	4 meter	in the middle of the foot beam	234
11	4 meter	in the middle of the foot beam	316
12	4 meter	in the middle of the foot beam	409

B.5 Ground pressure of a base stand OLite display

All calculations are based upon a wind load of 0,8 kN/m² (±129 km/h) which comply with the TUV regulations. For more information consult the "Ballast calculator" tool, available on Barco's web site.

The ballast values are given per OLite rental foot mounted upon two foot beams. Ballast must be placed upon the last 30 cm of the foot beams.

The surface (footprint) of two foot beams is taken into account for the calculations of the ground pressure. Note that in case of using adjustable feet the total load of the LED-wall will press on the adjustable feet. So, always place supporting blocks underneath the foot beam to spread to load.

Ground pressure of an OLite display installed at the front of the foot beams

Single OLite rental foot						
	1,2 meter foot beams		2,4 meter foot beams		4 meter foot beams	
Height Tiles	kg/cm²	N/mm²	kg/cm²	N/mm²	kg/cm²	N/mm²
1	0.0784	0.0076	0.0292	0.0028	0.0153	0.0015
2	0.1653	0.0162	0.0588	0.0057	0.0301	0.0029
3	0.2698	0.0264	0.0926	0.0090	0.0463	0.0045
4	0.3982	0.0390	0.1319	0.0129	0.0645	0.0063
5	0.5505	0.0540	0.1768	0.0173	0.0846	0.0104
6	0.7266	0.0712	0.2273	0.0223	0.1067	0.0128
7	0.9267	0.0909	0.2833	0.0278	0.1307	0.0153
8	1.1507	0.1128	0.3450	0.0338	0.1567	0.0181
9	1.3985	0.1371	0.4122	0.0404	0.1846	0.0210
10	Not allowed	Not allowed	Not allowed	Not allowed	Not allowed	Not allowed
11	Not allowed	Not allowed	Not allowed	Not allowed	Not allowed	Not allowed
12	Not allowed	Not allowed	Not allowed	Not allowed	Not allowed	Not allowed

Ground pressure of an OLite display installed in the middle of the foot beams

Single OLite rental foot						
	1,2 meter foot beams		2,4 meter foot beams		4 meter foot beams	
Height Tiles	kg/cm²	N/mm²	kg/cm²	N/mm²	kg/cm²	N/mm²
1	0.0543	0.0053	0.0205	0.0020	0.0123	0.0012
2	0.1171	0.0114	0.0380	0.0037	0.0228	0.0022
3	0.1975	0.0193	0.0589	0.0057	0.0333	0.0032
4	0.3018	0.0296	0.0870	0.0085	0.0439	0.0043
5	0.4300	0.0421	0.1206	0.0118	0.0544	0.0053
6	0.5821	0.0571	0.1599	0.0156	0.0673	0.0066
7	0.7581	0.0743	0.2047	0.0200	0.0847	0.0083
8	0.9580	0.0939	0.2551	0.0250	0.1042	0.0102

Single OLite rental foot						
	1,2 meter foot beams		2,4 meter foot beams		4 meter foot beams	
Height Tiles	kg/cm²	N/mm²	kg/cm²	N/mm²	kg/cm²	N/mm²
9	1.1818	0.1159	0.3110	0.0305	0.1255	0.0123
10	1.4294	0.1402	0.3725	0.0365	0.1489	0.0146
11	Not allowed	Not allowed	0.4397	0.0431	0.1741	0.0170
12	Not allowed	Not allowed	Not allowed	Not allowed	0.2014	0.0197

C. ORDER INFO

Overview

- Spare part order info

C.1 Spare part order info

Order info:

Order info	Description
R9010330	Complete OLite 510 rental tile (controller and modules included)
R9853010	OLite 510 rental frame (empty)
R9853020	OLite 510 module
R98530205	OLite 510 module (5 pieces)
R98530220	OLite 510 module (20 pieces)
R9853090	OLite cable string for 16 OLite 510 modules
R98530904	OLite cable string for 16 OLite 510 modules (4 pieces)
R9853100	OLite cable string for 4 OLite 510 modules (8 pieces) (for creative purposes)
R9853111	OLite module extension cable of 1 meter (10 pieces) (for creative purposes)
R9853115	OLite module extension cable of 5 meter (10 pieces) (for creative purposes)
R9010410	Complete OLite 612 rental tile (controller and modules included)
R9853418	OLite 612 rental frame (empty)
R9853407	OLite 612 module
R9853408	OLite 612 module (5 pieces)
R9853409	OLite 612 module (20 pieces)
R9853419	OLite cable string for 12 OLite 612 modules (4 pieces)
R98530805	OLite module dummy plug (5 pieces)
R98530820	OLite module dummy plug (20 pieces)
R9010410F4	OLite rental flight case with four OLite 612 rental tiles (controller and modules included)
R9853030	OLite control box
R9851760	Power link cable of 0,8 meter
R9850241	Power link cable of 1,5 meter
R9850150	Power link cable of 4,5 meters
R9850260	Power link cable of 9 meters
R9850280	Five dummy power plugs (for power output sockets)
R9850210	Data linking cable of 1,5 meter
R9850220	Data linking cable of 5 meters
R9850270	Two dummy data plugs (for data output sockets)
Z3499467	Cover for unused output ports of the OLite control box
R9853070	OLite rental flight case for 4 tiles (without tiles)
R9853060	OLite single truss beam
R9853040	OLite dual truss beam
R9851915	Two foot beams of 4 meters
R9850176	Two foot beams of 2,4 meters
R9850177	Two foot beams of 1,2 meter

Order info	Description
R9853050	OLite base stand foot
R9851905	Base stand stacker foot
R9851900	Base stand stacker profile assembly (stacker profile + stacker bridge)
R9851470	Base stand adjustable foot (4 pieces)
R9853390	OLite module safety cable (5 pieces)

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